# STIC-Biotech/ChemLib

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Swope, Sheridan

Sent:

Thursday, October 27, 2005 3:29 PM

To:

STIC-Biotech/ChemLib

Subject:

10/649,273

For 10/649,273, please search and interference search:

SID 2: regular search against the NT and AA data bases

SID 2: oligo search (274 residues) against the NT and AA data bases

SID 2: residues 148-414, regular search against the NT and AA data bases

SID 2: residues 176-414, regular search against the NT and AA data bases

## Thanks!!

Sheridan Swope, Ph.D.
Patent Examiner, AU 1656
Recombinant Enzymes
571-272-0943 (voice)
E02B71 Remsen Bld (Office)
E03C70 Remsen Bld (Mailbox)

\*\*\*\*\*\*\*
Searcher:
Searcher Phone:
Date Searcher Picked up:
Date completed:
Searcher Prep Time:
Online Time:

 Vendors and cost where applicable STN:

DIALOG:
QUESTEL/ORBIT:
LEXIS/NEXIS:
SEQUENCE SYSTEM:
WWW/Internet:
Other (Specify):

## Swope, Sheridan

From:

Swope, Sheridan

Sent:

Wednesday, November 02, 2005 9:33 AM

To: Subject:

Arnold, Deirdre RE: 10/649,273

A, match of any contiguous 274 residues of sid 2

----Original Message----

From:

Arnold, Deirdre

Sent:

Wednesday, November 02, 2005 9:10 AM

To: Subject: Swope, Sheridan RE: 10/649,273

Do you mean that you are looking for (A) sequences that match 274 contiguous residues of SID 2 or (B) sequences that are at least 274 residues in length and match *any size* portion of SID 2?

Deirdre I. Arnold

### United States Patent and Trademark Office

Technical Information Specialist STIC Biotech/Chem Library 571-272-2532 Remsen 1 A64

-----Original Message-----

From: Swope, Sheridan

Contr. Wedgesday Neve

ent: Wednesday, November 02, 2005 9:03 AM

To: Arnold, Deirdre Subject: FW: 10/649,273

Please communicate via email, so I have a record.

"(274 residues) " means at least 274 residues. If that's not clear, let me know.

----Original Message-----

From:

Swope, Sheridan

Sent:

Thursday, October 27, 2005 3:29 PM

To:

STIC-Biotech/ChemLib

Subject: 10/649,273

For 10/649,273, please search and interference search:

SID 2: regular search against the NT and AA data bases

SID 2: oligo search (274 residues) against the NT and AA data bases

SID 2: residues 148-414, regular search against the NT and AA data bases

SID 2: residues 176-414, regular search against the NT and AA data bases



# STIC Search Report Biotech-Chem Library

# STILC Database Tracking Manning

TO: Sheridan Swope

Location: REM/2B71/3C70

Art Unit: 1656

Monday, November 14, 2005

Case Serial Number: 10/649273

From: Deirdre Arnold

**Location: Biotech-Chem Library** 

**REM 1A64** 

Phone: 571-272-2532

Deirdre.Arnold@uspto.gov

# Search Notes

Please review these results and contact me ASAP if you need to alter the search parameters.

Please feel free to contact me if you have any questions or would like to amend the search.

Thank you for using STIC services.

Regards,
Deirdre Arnold



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Minimum |
Maximum |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Database :
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Maximum Match 100%
Listing first 45 summaries
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Copyright (c) 1993 - 2005 Compugen Ltd
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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# ALIGNMENTS

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US-10-067-443-2

Sequence 2, Application US/10067443

Sequence 2, Application US/10067443

; Sequence 2, Application US/10067443

; Publication No. US20030082782A1

; GENERAL INFORMATION:
   APPLICANT: Bristol-Myers Squibb Company
   TITLE OF INVENTION: SPINAL CORD, MP-1

FILE OF INVENTION: SPINAL CORD, MP-1

FILE REFERENCE: D0073 NP

CURRENT APPLICATION NUMBER: US/10/067,443

; CURRENT FILING DATE: 2002-02-05

PRIOR APPLICATION NUMBER: US 60/266,518

PRIOR APPLICATION NUMBER: US 60/266,518

PRIOR FILING DATE: 2001-04-10

NUMBER OF SEQ ID NOS: 71

NUMBER OF SEQ ID NOS: 71
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; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-067-443-2
                                                                                                                                                                                        Query Match 100.0%; Score 2125; DB 14; Length 414; Best Local Similarity 100.0%; Pred. No. 1.7e-199;
                                                                                                                                                                                                                                                                                                                                        SOFTWARE: PatentIn version 3.0 SEQ ID NO 2
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                           61 LGEAIHSQTEVHLKTGGIVPPAAQQLHRENIQRIVQEALSASGVSPSDLSAIATTIKPGL
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TITLE OF INVENTION: POLYMUCLECTIDE ENCODING A NOVEL METALOPROTEASE,
FILE REFERENCE: D0073 CNT
CURRENT APPLICATION NUMBER: US/10/649,273
CURRENT FILING DATE: 2003-08-27
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR APPLICATION NUMBER: US 10/067,443
PRIOR FILING DATE: 2001-02-05
PRIOR FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOFTWARE: Patentin version 3.2
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             THRAILFCKQRDLLPQNNAVLVASGGVASNFYIRRALBILTNATQCTLLCPPPRLCTDNG
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                                                                                  PPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQHTMACHLVKR
                                                                PPLHHAKNCDFSFTGLQHVTDK11MKKEKEEG1EKGQ1LSSAAD1AATVQHTMACHLVKR
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Pred. No. 1.7e-199;
Mismatches 0;
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CURRENT APPLICATION UNMBER: US/10/651,722
CURRENT FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 10/067,443
PRIOR FILING DATE: 2002-02-05
PRIOR FILING DATE: 2002-04-10
PRIOR PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOPTWARE: PatentIn version 3.2
SEQ ID NO 2
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; TYPE: PRT
; ORGANISM: Homo s
US-10-651-722-2
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Publication No. US20040048302A1
GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLECTIDE ENCODING A NOVEL METALOPROTEASE,
FILE REFERENCE: D0073 DIV
Sequence 8, Application US/10480988

Publication No. US20050069977A1

GENERAL INFORMATION:
APPLICANT: GANDHI, Ameena R.; KABLE, Amy E.;
APPLICANT: SWARNAKAR, Anita; HAFALIA, Appril J.A.;
APPLICANT: TRAN, Bao; DUGGAN, Brendan M.;
APPLICANT: WARREN, Bridget A.; ISON, Craig H.;
APPLICANT: HONCHELL, Cynthia D.; NGUYEN, Danniel B.;
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Matches
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Best Local Similarity
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121 ALSLGVGLSFSLQLVGQLKKPFIPIHHMEAHALTIRLTNKVEFPFLVLLISGGHCLLALV 180
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APPLICANT: 105, Nearly, FORSITIE, 101
APPLICANT: GRIFFIN, Jennifer A.; LI, Joana X.;
APPLICANT: YANG, Junming; THANGAVELU, Kavitha;
APPLICANT: YANG, Junming; THANGAVELU, Kavitha;
APPLICANT: YANG, Junming; THANGAVELU, Kavitha;
APPLICANT: BAUGHN, Mariah R.; BOROWSKY, Mark L.;
APPLICANT: BAUGHN, Mariah R.; BOROWSKY, Mark L.;
APPLICANT: LEE, Sally; BECHA, Shanya D.;
APPLICANT: LEE, Sally; BECHA, Shanya D.;
APPLICANT: LEE, Sally; BECHA, Shanya D.;
APPLICANT: LEE, Soo Yeun; TRAN, Uyen K.;
APPLICANT: LU, Yan; ZEBARADIAN, Yeganeh
TITLE OF INVENTION: PROTEIN MODIFICATION AND MAINTENANCE MOLECULES
FILE REFERENCE: PP-1040 USN
CURRENT FILING DATE: 2003-12-16
PRIOR APPLICATION NUMBER: US/10/480,988
CURRENT FILING DATE: 2001-06-28
PRIOR APPLICATION NUMBER: US 60/300,508
PRIOR APPLICATION NUMBER: US 60/303,445
PRIOR APPLICATION NUMBER: US 60/311,442
PRIOR APPLICATION NUMBER: US 60/311,442
PRIOR APPLICATION NUMBER: US 60/314,821
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Best Local Similarity
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SOFTWARE: PERL Program
SEQ ID NO 8
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NAME/KEY: misc feature
OTHER INFORMATION: Incyte ID No:
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TYPE: PRT
ORGANISM: Homo sapiens
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Pred. No. 1.7e-199;
0; Mismatches 0;
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Sequence 19, Application US/10067443

Publication No. US20030082782A1

GENERAL INFORMATION:

APPLICANT: Bristol-Myers Squibb Company
ITILE OF INVENTION: POLYNUCLEOTIDE ENCODING A 1

FILE REFERENCE: D0073 NP

CURRENT APPLICATION NUMBER: US/10/067,443

CURRENT FILING DATE: 2002-02-05

PRIOR APPLICATION NUMBER: US 60/266,518

PRIOR APPLICATION NUMBER: US 60/266,518

PRIOR APPLICATION NUMBER: US 60/282,814

PRIOR APPLICATION NUMBER: US 60/282,814

PRIOR APPLICATION NUMBER: US 60/282,814

PRIOR FILING DATE: 2001-04-10

NUMBER OF SEQ ID NOS: 71

SOFTWARE: PatentIn version 3.0

SEQ ID NO 19
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Sequence 19, Application US/10649273
Publication No. US20040043407A1
GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING
FILE REFERENCE: D0073 CNT
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Best Local
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TYPE: PRT
ORGANISM: homo sapiens
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A NOVEL METALOPROTEASE,

MP-1

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CURRENT APPLICATION NUMBER: US/10/649,273
CURRENT FILING DATE: 2003-08-27
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR PILING DATE: 2001-02-05
PRIOR PILING DATE: 2002-02-05
PRIOR PILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOFTWARE: Patentin version 3.2
SEQ ID NO 19
LENGTH: 439
TYPE: PAT
ORGANISM: homo sapiens
US-10-649-273-19
APPLICANT: Bristol-Wyers Squibb Company
ITILE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE, MP-
FILE REFERENCE: D0073 DIV
CURRENT APPLICATION NUMBER: US/10/651,722
CURRENT FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 10/067,443
PRIOR APPLICATION NUMBER: US 10/282,814
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOFTWARE: PatentIn version 3.2
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Best Local Similarity
Matches 412; Conserv
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ilarity 93.8%;
Conservative
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Pred. No. 4.6e-196;
0; Mismatches 2;
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; ORGANISM: homo sapiens
US-10-651-722-19
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                                          US-10-012-140-5
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Matches
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          Query Match
Best Local Similarity
Matches 407;
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APPLICANT: Kapeller-Libermann, Rosana
APPLICANT: Glucksmann, Maria A.
                                                              LENGTH: 41
TYPE: PRT
                                                     ORGANISM: Homo
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Local Similarity 93.8%;
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Pred. No. 4.6e.
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          Score 2088; DB 14;
Pred. No. 7.5e-196;
Mismatches
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PRIOR APPLICATION NUMBER: 60/350,435
PRIOR FILING DATE: 2002-01-24
PRIOR FILING DATE: 2001-09-14
PRIOR FILING DATE: 2001-09-14
NUMBER OF SEQ ID NOS: 3381
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 2039
LENGTH: 364
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APPLICANT: NAGAI, KEIICHI
APPLICANT: IRIE, RYOTARO
APPLICANT: TAMECHIKA, ICHIRO
APPLICANT: TAMECHIKA, ICHIRO
APPLICANT: YOSHIKAWA, TSUTOMU
APPLICANT: OTSUKA, MOTOYUKI
APPLICANT: NAGAHARI, KENJI
APPLICANT: NAGAHARI, KENJI
APPLICANT: NASUHO, YASUHIKO
TITLE OF INVENTION: NOVEL FULL-LENGTH CDNA
FILE REPERENCE: 084335/0160
CURRENT APPLICATION NUMBER: US/10/094,749
CURRENT FILING DATE: 2002-03-12
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US-10-094-749-2039
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APPLICANT: SUGIYAM
APPLICANT: WAKAMATI
APPLICANT: SATO, H
APPLICANT: ISHII, I
APPLICANT: ISONO, I
APPLICANT: ISONO, I
APPLICANT: HIO, YUI
APPLICANT: OTSUKA,
APPLICANT: TARECHII
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APPLICANT: TARECHII
APPLICANT: TARECHII
APPLICANT: WAGAI, N
APPLICANT: WAGAIARR
APPLICANT: WAGAIARR
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Best Local Similarity
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SATO, HIROYUKI
ISHII, SHIZUKO
YAMAMOTO, JUN-ICHI
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OTSUKI, TETSUJI
                                     Conservative
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                                                 29.2%;
                                Score 1845; DB 15; Fred. No. 4.5e-172; 0; Mismatches 3;
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Sequence 22, Application US/10067443

Publication No. US20030082782A1

GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
ITILE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOTIFIE OF INVENTION: SPINAL CORD, MP-1
FILE REFERENCE: D0073 NP
CURRENT APPLICATION NUMBER: US/10/067,443

CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOFTWARE: Patentin version 3.0

SEQ ID NO 22
LENGTH: 267
TYPE: PRT
ORGANISM: homo sapiens
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Best Local Similarity
Matches 267; Conserv
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CURRENT APPLICATION NUMBER: US/10/651,722
CURRENT FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 10/067,443
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR PILING DATE: 2002-03-05
PRIOR PILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOFTWARE: PATENTIN VERSION 3.2
SEQ ID NO 22
LENGTH: 267
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SOFTWARE: Patentin version 3.2
SEQ ID NO 22
LENGTH: 267
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APPLICANT: Briscol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLECTIDE ENCODING A NOVEL METALOPROTEASE,
FILE REFERENCE: D0073 CNT
CURRENT APPLICATION NUMBER: US/10/649,273
CURRENT FILING DATE: 2003-08-27
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Publication No.
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PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 10/067,443
PRIOR FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
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No. US20040043407A1
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TITLE OF INVENTION: DETECTION KIT, SUCH AS NUCTURES.

TITLE OF INVENTION: ARRAYS, FOR DETECTING EXITITLE OF INVENTION: DROSOPHILA GENES.

FILE REFERENCE: CLOOD728

CURRENT APPLICATION NUMBER: US/11/097,143

CURRENT FILING DATE: 2005-04-04

FRIOR APPLICATION NUMBER: 60/157,832

PRIOR FILING DATE: 1999-10-05

PRIOR APPLICATION NUMBER: 60/160,191

PRIOR FILING DATE: 1999-10-19

PRIOR APPLICATION NUMBER: 60/161,932

PRIOR FILING DATE: 1999-10-28

PRIOR FILING DATE: 1999-10-28

PRIOR PILING DATE: 1999-10-28

PRIOR PILING DATE: 1999-11-28

PRIOR PILING DATE: 1999-11-29

PRIOR APPLICATION NUMBER: 60/173,383

PRIOR APPLICATION NUMBER: 60/173,383

PRIOR PILING DATE: 1999-12-28

PRIOR PILING DATE: 1999-12-28

PRIOR PILING DATE: 1999-12-28
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PRIOR FILING DATE: 2000-03-23
NUMBER OF SEQ ID NOS: 43008
SOPTWARE: FAStSEQ for Windows Versio.
SEQ ID NO 34191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 34191, Application US/11097143 
Publication No. US20050208558A1 
GENERAL INFORMATION:
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Best Local Similarity 100.0%;
Matches 267; Conservative (
                                                                                      Matches
                                                                                                         Query Match
Best Local Similarity
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PRIOR FILING DATE: 2000-01-12
PRIOR APPLICATION NUMBER: 60/184,831
PRIOR FILING DATE: 2000-02-24
                                                                                                                                                                                    TYPE: PRT
ORGANISM: DROSOPHILA
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; Pred. No. 4.2e-127;
0; Mismatches 0;
                                                                                    Score 714.5; DB 20;
Pred. No. 5.7e-61;
0; Mismatches 140;
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EXPRESSION OF 10,000 OR MORE
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CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 285684
SEQ ID NO 209259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 209259, Application US/10424599 Publication No. US20040031072A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: Soy Nucleic Acid Molecules and Other Molecules Associated TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement FILE REFERENCE: 38-21(53223)B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: La Rosa Thomas J
APPLICANT: Kovalic David K
APPLICANT: Zhou Yihua
APPLICANT: Cao Yongwei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 445
TYPE: PRT
ORGANISM: Glycine max
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION: Clone ID: PAT_MRT3847_3098C.1.pep
                                                                                                                                                                                                                                                                                                                                                                                               / Match 32.1%; Score 681.5; DB 15; Length Local Similarity 43.1%; Pred. No. 1.1e-57; les 155; Conservative 54; Mismatches 126; Indels
 332
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YIRRALEILTNATQCTLLCPPPRLCTDNGIMIAWNGIERLRAGLGILHDIEGIRYEPKCP 391
                                 SASNGDRL-SRADIAASFORIAVLHLEERCERAIQWALKMEPSIRH---LVVSGGVASNO 345
                                                                                                     --RSGGPAIEKLAMEGNAESVKFSIPMKQHKDCNFSYAGLKTQVRLAIESKKIDAKIPIS
                                                                                                                            STMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGLQ-----HVTDKIIMKXEKEE
                                                                                                                                                                                                           TNK-VEFPFLVLLISGGHCLLALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPEC
                                                                                                                                                                                                                                                    ALDKAYLTEKOLTAVAVTIGPGLSLCLRVGVQKARKIAGGFNLPIIGIHHMEAHALVGRL
                                                                                                                                                                                                                                                                       ALSASGYSPSDLSAIATTIKPGLALSLGYGLSFSLQLYGQLKKPFIFIHHMEAHALTIRL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RLWNGGRAIEHAAQLASDPLAYEFPLPLAQQRNCNFSFAGIKNNSFRAIRARERAERTPP
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TITLE OF INVENTION: SPINAL CORD, MP-1
FILE REFERENCE: D0073 NP
CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-02-05
PRIOR FILING DATE: 2001-04-10
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US-10-067-443-3
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Sequence 3, Application No. US20030082782A1

Publication No. US20030082782A1

GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company

APPLICANT: ON TRIFFORM POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 71
SOPTWARE: PatentIn version 3.0
SEQ ID NO 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 29.8%; Score 634; DB 14; Best Local Similarity 37.9%; Pred. No. 5.6e-53; Matches 145; Conservative 61; Mismatches 129;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 463
TYPE: PRT
ORGANISM: Arabidopsis thaliana
414
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                                                                                                                                                                                                                                                                                                                                                    202 VEQELSFPFMALLISGGHNLLVLAHKLGQYTQLGTTVDDAIGEAFDKTAKWLGLDMH---
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                                                                                                                                                                                                                 QILSSAADIAATVQHTMACHLVKRTHRAILFCKQRDLLPQNNAVLVASGGVASNFYIRRA 336
                                                                                                                                                                                                                                                                 --RSGGPAVEELALEGDAKSVKFNVPMKYHKDCNFSYAGLKTQVRLAIEAKE-----
                                                                                                                                                                                                                                                                                                       STMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKG
                                        -----PKCPLGVDISKEVGEA 403
                                                                                     LNNIVENKNLKLVCPPPSLCTDNGVMVAWTGLEHFRVG---
                                                                                                                              LEILTNATQCTLLCPPPRLCTDNGIMIAWNGIERLRAGLGILHDIEGIRYE-----
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Search completed: November 10, 2005, 16:58:50 Job time : 112.35 secs

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DB seq length: 2000000000
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   A_Geneseq_16Dec04:*
1: geneseqp1980s:*
2: geneseqp2900s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
8: geneseqp2004s:*
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2125
1 MLILTKTAGVFFKF
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Maximum Match 100%
Listing first 45 summaries
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geneseqp2001s:*
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1434.756 Million cell updates/sec
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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Result

No.	Score	Query Match	Query Match Length	DB	ID	Description
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2	2125	100.0	414	ഗ	ABB05481	Human
w	2125	100.0	414	σ	ABJ26654	
4.	2088	98.3	414	v	AAE29234	Human
s	2088	98.3	414	σ	ABG71161	Novel
6	2088	•	414	σ	ABU09569	Human
1	1845	8.98	364	σ	ADA54471	Human
8	1385	65.2	267	υ	ABG96487	Abg96487 Novel hum
9	714.5	33.6	409	4	ABB69133	Drosop
10	659.5	31.0	439	w	AAG19286	
11	659.5	31.0	444	w	AAG19285	
12	634	29.8	463	w	AAY52216	
13	549	25.8	179	vi	ABG96489	
14	524	24.7	382	σ	ABU22934	Abu22934 Protein e
15	524	24.7	421	ហ	ABG96491	
16	502	23.6	348	σ	ABU35232	Abu35232 Protein e
17	501	23.6	350	œ	ADL05040	Adl05040 M. catarr
18	499.5	23.5	401	7	AB068626	Abo68626 Pseudomon
19	494.5	23.3	343	δ	ABU39303	Abu39303 Protein e
20	492.5		341	4	AAU36205	Aau36205 Pseudomon
21	492.5	23.2	341	σ	ABU38276	Abu38276 Protein e
22	492.5		141	·J	ADG73342	-
23	490.5	23.1	341	7	ADG73344	ש
24	489.5	23.0	335	0	ABU27480	P
25	484.5	22.8	337	4	AAU34711	Aau34711 E. coli c

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6 ABU40069	6 ABU37844	3 AAY52208	6 ABU29893	6 ABU24130	7 ADC96982	6 ABM67812	7 AB062704	6 ABU30280	4 AAU35450	3 AAY52202	3 AAY52203	2 AAR26325	3 AAY52204	4 AAU38187	7 ADF06228	6 ABU40514	6 ABU50237	6 ABU28771	6 ABU47561
Abu40069	Abu37844	Aay52208	Abu29893	Abu24130	Adc96982	Abm67812	Abo62704	Abu30280	Aau35450	Aay52202	Aay52203	, Aar26325	Aay52204	Aau38187	Adf06228	Abu40514	Abu50237	Abu28771	Abu47561
Protein e	Protein e	Bacillus	Protein e	) Protein e	B. faeciu	? Photorhab	Klebsiell	_	_		Pasteurel	Glycoprot		/ Salmonell		l Protein e	/ Protein e	. Protein e	. Protein e

# ALIGNMENTS

RESULT 1

ABG96478
ID ABG9
XX ABG9
AC ABG9
XX 11-D
XX Nove
XX Nove
XX Nove
XX Meta
KW Meta
KW Park
KW Park
KW Park
KW Iive
KW empl
XX Nove
XX No Metalloprotease; MP-1; immune disorder; glutamate transport; cancer; motor neuron disorder; amyotrophic lateral sclerosis; ALS; diabetes; reproductive disorder; Kleinfelter's syndrome; germinal cell aplasia; genital wart; metabolic disorder; premature puberty; Kallman syndrome; Cushing's syndrome; neurodegenerative disease; Alzheimer's disease; Parkinson's disease; Huntington's disease; Tourette syndrome; sepsis; liver disease; renal disease; lisorder; rheumatoid arthritis; acquired immunodeficiency syndrome; AIDS; pulmonary disease; pneumonia; emphysema; cystic fibrosis; vascular disorder; inflammatory disorder; Homo sapiens. neurological disorder. 11-DEC-2002 ABG96478; ABG96478 standard; protein; Novel human metalloprotease MP1. (first entry) 414 B

WO200272751-A2

19-SEP-2002.

05-FEB-2002; 2002WO-US003353.

05-FEB-2001; 2001US-0266518P. 10-APR-2001; 2001US-0282814P.

(BRIM) BRISTOL-MYERS SQUIBB CO

Feder J,

Nelson TC,

Duclos

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Krystek S;

N-PSDB; ABS76635. WPI; 2002-723329/78.

Chen J,

New isolated nucleic acid encoding MP-1 protein, useful for preventing, treating, or ameliorating diseases associated with aberrant metalloproteinase activity, e.g. immune, metabolic, inflammatory and neurological disorders.

Claim 5; Fig 1A-C; 473pp; English.

The invention describes an isolated nucleic acid molecule (I) encoding a metalloprotease (MP-1). (I) is useful for preventing, treating, or

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RESULT 2
ABB054B1
ID ABB0
XX
ABB054B
AC ABB0
XX
AC ABB0
XX
DE Huma
XX
DE Homo
OS Homo
OS Homo
OS 24-C
XX
PP 19-A
XX
PR 19-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         amyotrophic lateral sclerosis (ALS), its juvenile form or an ALS-like condition. The compositions and methods are also useful for diagnosing, prognosticating, treating, ameliorating and/or treating disorders prognosticated with MP-1 activity, e.g. diabetes, cancer, reproductive disorders (e.g. Kleinfelter's syndrome, genital warts, or germinal cell or Cushing's syndrome), neurodegenerative diseases (Alzheimer's disease, Cor Cushing's syndrome), neurodegenerative diseases (Alzheimer's disease, Parkinson's disease, Huntington's disease or Tourette syndrome), liver and renal diseases and immune disorders (e.g. AlDS, rheumatoid arthritis CC or sepsis), pulmonary diseases (e.g. pneumonia, emphysema or cystic fibrosis) and vascular, inflammatory and neurological disorders (e.g. Alzheimer's disease or Parkinson's disease). This is the amino acid contents of a metalloprotease MP1 protein
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Best Local S
Matches 414
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                                                                                                        24-OCT-2001
                                                                                                                                                 CN1318550-A.
                                                                                                                                                                                          Homo
                                                                                                                                                                                                                               Human; O-sialoglycoproteinase-like
                                                                                                                                                                                                                                                                           Human O-sialoglycoproteinase-like protein SEQ ID NO:2
                                                                                                                                                                                                                                                                                                                    19-APR-2002
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                   19-APR-2000; 2000CN-00106834
                                                            19-APR-2000; 2000CN-00106834
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Pred. No. 2.2e-215;
; Mismatches 0;
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Best Local Sim
Matches 414;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               O-sialogycoproteinase-like protein and encoding for diagnosing, preventing and treating related
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                             Cytostatic; antiarteriosclerotic; anti-HIV; antiallergic; anticonvulsant; cerebroprotective; antiparkinsonian; nootropic; antiinflammatory; antiulcer; hepatotropic; gynaecological; antibacterial; virucide; protozoacide; antiparasitic; cell proliferative disease; PMOD;
             protozoacide; antiparasitic; cell proliferative disease; protein modification and maintenance molecule; immunogeni
                                                                                                                Human protein modification + maintenance molecule protein SEQ
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                                                                                                                                                                                                                      standard;
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                      immunogenic fragment;
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autoimmune; inflammatory

disease;

neurological

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                                                                                                                                     CC Sequences of 48-1256 amino acids; a natural amino acid sequence of 48-1256 amino acids; a natural amino acid sequence at least CC 90% identical to the 28 amino acid sequences, 94% identical to a sequence CC of 703 or 267 amino acids, 96% identical to a sequence of 414 amino CC acids, or 97% identical to a sequence of 422 amino acids, all given in CC the specification; or a biologically active or immunogenic fragment of the isolated polypeptide. The polypeptides and polymucleotides are useful in diagnosing, treating and preventing diseases or conditions associated with the decreased expression of protein modification and maintenance completeles (PMOD), such as cell proliferative diseases (e.g. cancer, CC allergies), neurological disorders (e.g. stroke, Parkinson's disease, CC epilepsy), gastrointestinal (e.g. ulcer, cirrhosis), reproductive (e.g. endometriosis), developmental, vesicle trafficking disorders, and CC infections (e.g. bacterial, viral, parasitic, protozoal). These are also cuseful in assessing the effects of exogenous compounds on the expression of mucleic acid and amino acid sequences of PMOD. The PMOD or its or antagonist of the polypeptides, or in altering the expression of the carget polynucleotide and compounds that specifically bind to or modulate the activity of the polypeptides. The microarray is useful in monitoring compounds protein protein protein interactions, drug-target interactions, and gene expression profiles. This sequence represents a human PMOD protein of the invention
                                                                  Query Match
Best Local S
Matches 414
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06-JUL-2001; 2001US-0303445P.
13-JUL-2001; 2001US-0305405P.
09-AUG-2001; 2001US-0311442P.
24-AUG-2001; 2001US-031821P.
29-AUG-2001; 2001US-0318992P.
03-MAY-2002; 2002US-0378205P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New isolated human PMOD polypeptide and polynucleotide, useful for diagnosing, treating and preventing diseases or conditions associated with the aberrant PMOD expression, e.g. cancer, AIDS, atherosclerosis
                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 63;
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protein-protein interaction; drug-target interaction;
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Ison CH,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present invention relates to novel 38650, 28472, 5495, 65507, 81588 or 14354 nucleic acid molecules which encode adenosine deaminase, glycoprotease or seven transmembrane domain (TTM) receptor family members. Sequences of the invention are useful in diagnosing and treating cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1;
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08-NOV-2000; 2000US-0246772P.
15-NOV-2000; 2000US-0249185P.
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                    THRA ILFCKQRDLLÞQNNAVLVASGGVASNFYIRRALEILTNATQCTLLCPPPRLCTDNG
                                                                                                    PPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQHTMACHLVKR 300
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THRAILFCKQRDLLPQNNAVLVASGGVASNFY IRRALEILTNATQCTLLCPPPRLCTDNG
                                                                               PPLHHAKNCDFSFTGLQHVTDKNNENRKQEEGIEKGQILSSAADIAATVQHTMACHLVKR
                                                                                                                                                          QGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKQGNRFHFDIK
                                                                                                                                                                                                                                          ALSLGVGLSFSLQLVGQLKKPFIPIHHMEAHALTIRLTNKVEFPFLVLLISGGHCLLALV 180
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llarity 98.3%;
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                                                                              The invention describes isolated 38650, 28472, 5495, 65507, 81588 and 14354 nucleic acid molecules (I) and their encoded polypeptides (II). The 38650 nucleic acid molecule comprises a sequence encoding adenosine deaminase. The 28472 nucleic acid molecule comprises a sequence encoding a human glycoprotease. The 5495, 65507, 81588 and 14354 comprise sequences that encode a human seven transmembrane domain (7TM). The 38550, 28472, 54597, 81588 or 14354 nucleic acid and polypeptide sequences are useful for diagnosing, preventing or treating a subject with or at risk of developing a disorder, e.g. cancer or aberrant cellular proliferation and/or differentiation (e.g. breast, ovarian, prostate, colon or lung cancer), immune disorders, heart disorders, cardiovascular disorders, endothelial disorders, heart disorders, brief disorders, brief disorders, heart disorders.
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08-NOV-2000;
15-NOV-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 4; Fig 8A-B; 178pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New adenosine deaminase, glycoprotease and seven transmembrane domain nucleic acids and polypeptides, designated 38650, 28472, 5495, 65507, 81588 and 14354, useful for treating e.g. leukemias, Hodgkin's diseas
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blood vessel disorders, brain disorders, pain and metabolic disorders, liver disorders or platelet disorders. These disorders include carcino

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08-NOV-2000;
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                                                                                                                                                                                         Human; enzyme; cancer; aberrant cellular proliferation; differentiation; immune disorders; heart disorder; brain disorder; cardiovascular disorder; endothelial cell disorder; pain disorder; haematopoeitic disorder; blood vessel disorder; metabolic disorder; liver disorder; platelet disorder; glycoprotease.
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(KAPE/)
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KAPELLER-LIBERMANN
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                                                                                                                                                                                                                                                                                                                                          standard;
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2000US-0246772P. Y&S
2000US-0249185P.
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No. 1.9e-211;
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 414
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                                                                               THRAILFCKQRDLLFQNNAVLVASGGVASNFYIRRALBILTNATQCTLLCFPPRLCTDNG
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Pred. No. 1.9e-211;
3; Mismatches 4;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Isogai T,
Yamamoto J
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24-JAN-2002;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  polynucleotides encoding full-length polypeptides, e.g. secretory or membrane proteins, useful for developing medicines for disease the gene is involved, or as target molecules for gene therapy.
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DB; ADA52832.
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Yoshikawa
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Isono Y,
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2002US-0350435P.
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Otsuka K, Nagai K, Irie R,
M, Nagahari K, Masuho Y;
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                                                                                             Metalloprotease; MP-1; immune disorder;
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                                                                                                           standard;
                                                                                                metalloprotease
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                                                                                                           protein;
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motor neuron disorder; amyotrophic lateral sclerosis; ALS; diabetes; reproductive disorder; Kleinfelter's syndrome; germinal cell aplasia; genital wart; metabolic disorder; premature puberty; Kallman syndrome; Cushing's syndrome; neurodegenerative disease; Alzheimer's disease; Parkinson's disease; Huntington's disease; Tourette syndrome; sepsis; liver disease; renal disease; immune disorder; rheumatoid arthritis; acquired immunodeficiency syndrome; AlDS; pulmonary disease; pneumonia; emphysema; cystic fibrosis; vascular disorder; inflammatory disorder; neurological disorder. Homo sapiens. glutamate transport; cancer;

05-FEB-2001; 2001US-0266518P. 10-APR-2001; 2001US-0282814P. N-PSDB; Chen 05-FEB-2002; 2002WO-US003353 19-SEP-2002 WO200272751-A2 (BRIM ) 2002-723329/78. DB; ABS76639. BRISTOL-MYERS SQUIBB Feder J, Nelson ĭĊ, 8 Duclos **'**E) Krystek ß

New isolated nucleic acid encoding MP-1 protein, useful for preventing, treating, or ameliorating diseases associated with aberrant metalloproteinase activity, e.g. immune, metabolic, inflammatory and neurological disorders.

Claim 5; Page 29; 473pp; English

The invention describes an isolated nucleic acid molecule (I) encoding a metalloprotease (Mp-1). (I) is useful for preventing, treating, or a metalloprotease (Mp-1). (I) is useful for preventing, treating, or a meliorating a medical condition, particularly an immune disorder, an composition of the compositions and methods are also useful for diagnosing, condition. The compositions and methods are also useful for diagnosing, condition. The compositions and methods are also useful for diagnosing, compositicating, treating, ameliorating and/or treating disorders compositions and methods are also useful for diagnosing, consisted with Mp-1 activity, e.g. diabetes, cancer, reproductive associated with Mp-1 activity, e.g. diabetes, cancer, reproductive consisted of the constant fibrosis) and vascular, inflammatory and new Alzheimer's disease or Parkinson's disease). sequence of a metalloprotease MP1 protein

Sequence \$

Query Match Best Local Local Sin hes 267; Similarity 100 67; Conservative 65.2%; but 100.0%; Pr Score 1385; DB 5; Pred. No. 2.4e-137; 0; Mismatches 0; Length 267; Indels ۰, Gaps 0

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                        The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention useful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABL0187-ABL30511), expressed DNA sequences (ABL01840-ABL16175) and the encoded proteins (ABB57737-ABB72072). The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
 Sequence 409
                                                                                                                                                                                                                      Disclosure; SEQ ID NO 34191; 21pp + Sequence Listing; English
                                                                                                                                                                                                                                                                        New isolated nucleic acid
genes from Drosophila and
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11-JUL-2000; 2000US-00614150
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DB; ABL13236.
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Query Match

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21-APR-1999;
23-APR-1999;
23-APR-1999;
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30-APR-1999;
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 25-FEB-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ygjD protein; essential; Gram positive; Gram negative; conserved; motif; identification; antagonist; antibacterial; antibiotic; broad spectrum;
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                                                                                                                                                                                                                                                                                                                                                      145;
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--RSGGPAVEELALEGDAKSVKFNVPMKYHKDCNFSYAGLKTQVRLAIBAKE---
                                        STMSGGKAT RHI.AKQCMPEHPDIKEPLHHAMICDESPTGLQIIVTDKI IHKKEKEEGIEKG
                                                                                                                               T-NKVEFPFLVLLISGGHCLLALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPEC
                                                                                                                                                                         ALDKANLTEKDĹSÁVÁVTÍGÞGLSLCLRVGVRKARRVAGNFSLÞIVGVHIMEÁHALVARL
                                                                                                                                                                                                  ALSASGVSPSDLSAIATTIKPGLALSLGVGLSFSLQLVGQLKXPFIPIHHMEAHALTIRL
                                                                                                                                                                                                                                                              VVLGIETSCDDTAAAVVSPFNHLSSSC---RAELLVQYGGVAPKQAEEAHSRVIDKVVQD
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                                                                                                                                                                                                                                                                                                                                                      Conservative
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                                                                                                                                                                                                                                                                                                                                                                   29.8%;
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.259
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              resistance; drug target
                                                                                    SGGHNLLVLAHKLGQYTQLGTTVDDAIGEAFDKTAKWLGLDMH----
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "ygjD conserved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Loferer H,
                                                                                                                                                                                                                                                                                                                                                   61;
                                                                                                                                                                                                                                                                                                                                                                       Score 634; DB 3;
Pred. No. 1.8e-57;
                                                                                                                                                                                                                                                                                                                                                      Mismatches
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                         The invention describes an isolated nucleic acid molecule (I) encoding a metalloprotease (MP-1). (I) is useful for preventing, treating, or ameliorating a medical condition, particularly an immune disorder, an aberrant glutamate transport or motor neuron disorder, such as amyotrophic lateral sclerosis (ALS), its juvenile form or an ALS-like condition. The compositions and methods are also useful for diagnosing, prognosticating, treating, ameliorating and/or treating disorders associated with MP-1 activity, e.g. diabetes, cancer, reproductive disorders (e.g. Kleinfelter's syndrome, geniral warts, or germinal cell aplasia), metabolic disorders (e.g. premature puberty, Kallman syndrome, parkinson's disease, Huntington's disease or Tourette syndrome), liver and renal disease, di immune disorders (e.g. ALDS, rheumatoid arthritis or sensia) nulmonary diseases or four sensial or sensial contents (e.g. numbrosma or cystic
                                                                                                                                                                                                                                                                                                                                                              New isolated nucleic acid encoding MP-1 protein, useful for preventing, treating, or ameliorating diseases associated with aberrant metalloproteinese activity, e.g. immune, metabolic, inflammatory and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Parkinson's disease; Huntington's disease; Tourette syndrome; sepsis; liver disease; renal disease; immune disorder; rheumatoid arthritis; acquired immunodeficiency syndrome; AIDS; pulmonary disease; pneumonic emphysema; cystic fibrosis; vascular disorder; inflammatory disorder; neurological disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Metalloprotease; MP-1; immune disorder; glutamate transport; cancer; motor neuron disorder; amyotrophic lateral sclerosis; ALS; diabetes; reproductive disorder; kleinfelter's syndrome; germinal cell aplasia; genital wart; metabolic disorder; premature puberty; Kallman syndrome; Cushing's syndrome; neurodegenerative disease; Alzheimez's disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            05-FEB-2001; 2001US-0266518P 10-APR-2001; 2001US-0282814P
                 or sepsis), pulmonary diseases (e.g.
                                                                                                                                                                                                                                                                                                         Disclosure; Page 50; 473pp; English
                                                                                                                                                                                                                                                                                                                                                neurological disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chen J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      05-FEB-2002; 2002WO-US003353
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Feder J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DYVYDLRPRWPLGEEYAKGRSEA 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -- IRNRADIAASFORVAVLHLEEKCERAIDWALE---LEPSIKHMVISGGVASNKYVRLR 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LNNI VENKULKLVCPPPSLCTDNGVMVAWTGLEHFRVG-
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
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                 pneumonia, emphysema or
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                 cystic
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RESULT 14
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Best Local (
        The invention relates to an isolated nucleic acid comprising any one of the 6213 antisense sequences given in the specification where expression of the nucleic acid inhibits promoter operably linked to the nucleic acid encoding a promoter operably linked to the nucleic acid encoding a polypeptide whose expression is inhibited by the antisense nucleic acid; (2) a host cell containing the vector; (3) an isolated polypeptide or its fragment whose expression is inhibited by the antisense nucleic acid; (4) an antibody capable of specifically binding the polypeptide; (5) producing the polypeptide; (6) inhibiting cellular proliferation or the activity of a gene in an operon required for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alzheimer's disease or Parkinson's disease). This is the sequence of a metalloprotease MP1 protein
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                                                                                                                                               Claim
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08-FEB-2002;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bordetella pertussis.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABU22934;
                                                                                                                                                                                                                                                                                              (ELIT-)
                                                                                                                                                                   antisense nucleic acids, useful for identifying proteins or screening homologous nucleic acids required for cellular proliferation to late candidate molecules for rational drug discovery programs.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                encoded by Prokaryotic essential gene #8461.
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                                                                                                                                               SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           prokaryotic
                                                                                                                                                                                                                                                                                                                   ; 2001US-00815242.
; 2001US-00948993.
; 2001US-0342923P.
; 2002US-00072851.
; 2002US-0362699P.
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identifying a compound
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Pred. No. 3.8e-49;
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Forsyth
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Xu HH;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CC the gene product or that has an activity against a biological pathway CC required for proliferation, or that inhibits cellular proliferation; (8) CC identifying a gene required for cellular proliferation or the biological CC pathway in which a proliferation-required gene or its gene product lies CC or a gene on which the test compound that inhibits proliferation of an CC compound's activity; (11) a culture comprising strains in which the gene CC product is overexpressed or underexpressed; (12) determining the extent CC to which each of the strains is present in a culture or collection of CC strains; or (13) identifying the target of a compound that inhibits the CC proliferation of an organism. The antisense nucleic acids are useful for identifying proteins or screening for homologous nucleic acids required concellular proliferation to isolate candidate molecules for rational CC drug discovery programs, or for screening homologous nucleic acids crequired for proliferation in cells other than S. aureus, S. typhimurium, C K. pneumoniae or P. aeruginosa. The present sequence is encoded by one of the target prokaryotic essential genes. Note: The sequence data for this captane in collection is electronic format directly from WIPO at C francisc in the printed specification, but was obtained on electronic format directly from WIPO at
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Matches 134
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                                          322
                                                                                                                                                                                                                                                                                                  144 PIHHMEAHALTIRLTN-KVEFPFLVLLISGGHCLLALVQGVSDFLLLGKSLDIAPGDMLD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  134;
                                                                                                                                                                                                                                                                                                                                                               84
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VVAGGVGANALLRAHLARALKPLRAEAYFPPLSLCTDNGAMIAFAAAERVKAGLADLRE
                                          VASGGVASNFYIRRALEILTNATQCTLLCPPPRLCTDNGIMIAWNGIERLRAGLGILHD
                                                                                         RV--KAATRDGGELGE--QDRADLAAATQAAIVEVLAAKAIRAL---
                                                                                                                                                                             KVARRLSLIKHPECSTMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGLQ-HVTD 261
                                                                                                                                                                                                                                                                         GIHHLEGHLLSPLLAEPRPEFPFVALLVSGGHTQLMLVDGVGRYELLGETLDDAAGEAFD
                                                                                                                                                                                                                                                                                                                                                               SRDHIRRVVPLTRQVLAEAGLTLADVGAVAYTAGPGLAGALLVGASVAQALAWSRALPAI
                                                                                                                                                                                                                                                                                                                                                                                                          QQLHRENIQRIVQEALSASGVSPSDLSAIATTIKPGLALSLGVGLSFSLQLVGQLKKPFI
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HPG--TLFLHK---IVLGIETSCDDTAAAVVDETGNVLGEAIHSQTEVHLKTGGIVPPAA
                                                                                                                                 KIIMKKEKEEGIEKGQILSSAADIAATVQHTMACHLVKRTHRAILFCKQRDLLPQNNAVL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 524; DB 6;
Pred. No. 5.7e-46;
3; Mismatches 136
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 382;
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                                                                                           KQTGL----RRL
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Novel
                                                               ABG96491 standard; protein;
                                          human
                                          metalloprotease
                                                 (first entry)
                                          associated protein
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Metalloprotease; MP-1; immune disorder; glutamate transport; cancer; motor neuron disorder; amyotrophic lateral sclerosis; ALS; diabetes; reproductive disorder; Kleinfelter's syndrome; germinal cell aplasia; genital wart; metabolic disorder; premature puberty; Kallman syndrome; genital wart; metabolic disorder; premature puberty; Kallman syndrome; Cushing's syndrome; neurodegenerative disease; Albeimer's disease; Cushing's syndrome; neurodegenerative disease; Albeimer's disease; Parkinson's disease; Huntington's disease; Tourette syndrome; sepsis; liver disease; renal disease; immune disorder; rheumatoid arthritis; acquired immunodeficiency syndrome; AIDS; pulmonary disease; pneumoni emphysema; cystic fibrosis; pneumonia;

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Query Match
Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              or sepsis), pulmonary diseases (e.g. pneumonia, emphysema or cystic fibrosis) and vascular, inflammatory and neurological disorders (e.g. Alzheimer's disease or Parkinson's disease). This is the amino acid sequence of a metalloprotease MPI associated protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New isolated nucleic acid encoding MP-1 protein, useful for preventing, treating, or ameliorating diseases associated with aberrant metalloproceinase activity, e.g. immune, metabolic, inflammatory and neurological disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention describes an isolated nucleic acid molecule (I) encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure; Page 465-466; 473pp; English.
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10-APR-2001; 2001US-0282814P.
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GAISKLSAAHNVTTIKVLLSLCTDNAEMIAYSGL-----LMLVNRSEAIWWRPNDIPDT
                                                                                                                                                                                                                                      GIHVGAAVEILASRASADGHLRYPIFLPNVPKANMNPDQIKGSYLNLLERLRKNSETSID
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                                                             RALEILTNATQCTLLCPPPRLCTDNGIMIAWNGIERLRAGIGILHDIEGIRYEP-----
                                                                                                                                                                                                                                                                                                TMSGGKAIEHLAKQGN---RFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIE 274
                                                                                                                                                                                                                                                                                                                                                             DDSVRFPFSAVLLSGGHALISVAEDVEKFKLYGQSVSGSPGECIDKVARQLGDL-GSEFD
                                                                                                                                                                                                                                                                                                                                                                                                     -NKVEFPFLVLLISGGHCLLALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECS 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LNDAGTSPKOLDAVAVTVTPGLVIALKEGISAAIGFAKKHRLPLIPVHHYKAHALSILLV 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LSASGVSPSDLSAIATTIKPGLALSLGVGLSFSLQLVGQLKKPFIPIHHMEAHALTIRLT 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VIGIETSCDDTAVAIVNEKREILSSERYTERAIQRQQGGINPSVCALQHRENLPRLIEKC 84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VLGIETSCDDTAAAVVDETGNVLGEAIHSQTEVHLKTGGIVPPAAQQLHRENIQRIVQEA 98
                                                                                                                                                                           KGQILSSAADIAATVQHTMACHLVKRTHRAILFCKQRDLLPQNNAVLVASGGVASNFYIR 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24.7%; Score 524; DB 5; llarity 33.4%; Pred. No. 6.7e-46; Conservative 77; Mismatches 146
                                                                                                                 ----IPDFCASLONTVARHISSKLHIFFESLSEQEKLPKQ---LVIGGGVAANQYIF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ΑĄ,
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Db 368 IYAHARSDIGTDASSEI----IDTPRRKL 392
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Search completed: November 10, 2005, 16:48:01 Job time : 116.6 secs

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Listing first 45 summaries
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  GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd.
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# ALIGNMENTS

probable O-sialoglycoprotein endopeptidase [imported] - Arabidopsis thaliana (;Species: Arabidopsis thaliana (mouse-ear cress) C;Species: Arabidopsis thaliana (mouse-ear cress) C;Pate: 02-Feb-2001 #sequence\_revision 02-Feb-2001 #text\_change 02-Jun-2003 C;Pate: 02-Feb-2001 #sequence\_revision 02-Feb-2001 #text\_change 02-Jun-2003 C;Accession: E84888 C;Accession: E84888 R;Lin, X.; Kaul, S.; Rounsley, S.D.; Shea, T.P.; Benito, M.I.; Town, C.D.; Fujii, C.Y.; M.; Koo, H.; Moffat, K.S.; Cronin, L.A.; Shen, M.; VanAken, S.E.; Umayam, L.; Tallon, L. euss, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, Ceuss, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, Constant of the control of the cont ঠ 문 ঠ 밁 S S A;Gene: At2945270
A;Map position: 2
C;Superfamily: O-sialoglycoprotein endopeptidase A;Status: preliminary A;Molecule type: DNA A;Residues: 1-463 <STO> Nature 402, 761-768, 1999
A;Title: Sequence and analysis of chromosome 2 of the plant Arabidopsis thaliana. A;Reference number: A84420; MUID:20083487; PMID:10617197
A;Accession: E84888 밁 밁 8 밁 8 C; Genetics: A; Cross-references: Matches 145; Query Match Best Local S Local Similarity 142 388 364 309 202 VEQELS PPEMALLISGGHNILVLAHKIGQYTQLGTTVDDAIGEAFDKTAKWIGLDMH----158 T-NKVEFPFLVLLISGGHCLLALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPEC 85 VVLGIETSCDDTAAAVVSPFNHLSSSC---RAELLVQYGGVAPKQABEAHSRVIDKVVQD 38 IVIGIETSCDDTAAAVVDETGNVLGEAIHSQTEVHLKTGGIVPPAAQQLHRENIQRIVQE 97 98 ALSASGVSPSDLSAIATTIKPGLALSLGVGLSFSLQLVGQLKKPFIPIHHMEAHALTIRL STMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKG QILSSAADIAATVQHTMACHLVKRTHRAILFCKQRDLLPQNNAVLVASGGVASNFYIRRA --RSGGPAVEELALEGDAKSVKFNVPMKYHKDCNFSYAGLKTQVRLAIEAKE-----LINNI VENKNIKI VCPPPSI CTDNGVMVAWTGLEHFRVG LEILTNATQCTLLCPPPRLCTDNGIMIAWNGIERLRAGLGILHDIEGIRYE--------IRNRADÍAASFQRVAVLHLEEKCERAÍDWALE---LEPSIKHMVISGGVASNKÝVRLR -----PKCPLGVDISKEVGEA 403 ALDKANLTEKDLSAVAVTIGPGLSLCLRVGVRKARRVAGNFSLPIVGVHHMEAHALVARL Conservative 61; Mismatches 129; Indels GB:AE002093; NID:g2583127; PIDN:AAB82636.1; GSPDB:GN00139 29.8%; Score 634; DB 2 37.9%; Pred. No. 2e-43; DB 2; Length 463 -RYDPPPPATEPB 48; Gaps 413 336 276 216 157 141 308 201 258

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O-sialoglycoprotein endopeptidase gcp [imported] - Agrobacterium tumefaciens (C;Species: Agrobacterium tumefaciens (C;Species: Agrobacterium tumefaciens (C;Date: 11-Jan-2002 #sequence_revision 11-Jan-2002 #text_change 18-Nov-2002 C;Accession: AB2902 C;Accession: AB2902 R;Wood, D.W.; Setubal, J.C.; Kaul, R.; Monks, D.; Chen, L.; Wood, G.E.; Chen, erage, G.; Gillet, W.; Grant, C.; Guenthner, D.; Kutyavin, T.; Levy, R.; Li, M.; Karp, P.; Romero, P.; Zhang, S.; Karp, P.; Romero, P.; Zhang, S. Science 294, 2317-2323, 2001 Science 294, 2317-323, 2001 A;Authors: Yoo, H.; Tao, Y.; Biddle, P.; Jung, M.; Krespan, W.; Perry, M.; Gor
                                                                                                                                                                                                                                                                                                               RESULT 3
AB2902
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C; Superfamily:
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A;Experimental source: strain Madrid E
C;Genetics:
                 A;Title: The Genome of the Natural Genetic A;Reference number: AB2577; MUID:21608550; A;Accession: AB2902 A;Status: preliminary
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C;Date: 21-Nov-1998 #sequence_revision 21-Nov-1998 #text_change 09-Jul-2004
C;Accession: E71711
A; Molecule type: DNA
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A; Residues: 1-387 < AND >
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A;Status: preliminary; nucleic acid sequence
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                                                                                                                      Y.; Biddle, P.; Jung, M.; Krespan, W.; Perry, M.; Gordon-Kamm,
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                                                              Engineer Agrobacterium tumefaciens PMID:11743193
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5.6e-37;
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A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-366 <KUR>
A;Cross-references: GB:A
C;Genetics:
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A;Map position:
C;Superfamily: O
                                                                                                                                                                                                                                                                                                                                                                                                           probable o-sialoglycoprotein endopeptidase (glycoproteinase) [imported] - Agrobacterium C;Species: Agrobacterium tumefaciens C;Date: 30-Sep-2001 #sequence_revision 30-Sep-2001 #text_change 18-Nov-2002 C;Accession: D97677 R;Goodner, B.; Hinkle, G.; Gattung, S.; Miller, N.; Blanchard, M.; Qurollo, B.; Goldman, A.; Liu, F.; Wollam, C.; Allinger, M.; Doughty, D.; Scott, C.; Lappas, C.; Markelz, B.; Science 294, 2323-2328, 2001 A;Title: Genome Sequence of the Plant Pathogen and Biotechnology Agent Agrobacterium tum A;Reference number: A97359; MUID:21608551; PMID:11743194
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A;Cross-references: GB:AE008688; PIDN:AAL43632.1; PID:g17741154; GSPDB:GN00186
A:Rxmerimental source: strain C58 (Dupont)
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                                                                                                                                                                                                                             A;Gene: AGR_C_4806
A;Map position: circular chromosome
C;Superfamily: O-sialoglycoprotein endopeptidase
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Best Local Similarity
Matches 137; Conserv
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VEEALDQAGVKLADVDAIAATSGPGLIGGLLVGLWTGKAIAKAAGKPLYAINHLEGHALT
                                    VQEALSASGVSPSDLSAIATTIKPGLALSLGVGLSFSLQLVGQLKKPFIPIHHMEAHALT
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                                                                                                                                                                                                                                                                                                                GB:AE007869; PIDN:AAK88373.1; PID:g15157858; GSPDB:GN00169
                                                                                                                                                                          25.8%; Score 548; DB 2; 36.9%; Pred. No. 1.3e-36;
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                                                                                                                                                        58;
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RESULT
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A;Title: Mechanisms of Evolution in Rickettsia conorii and Rickettsia A;Reference number: A97700; MUID:21442074; PMID:11557893
A;Accession: E97707
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C;Date: 30-Sep-2001 #sequence_revision 30-Sep-2001 #text_change 22-Oct-2001
C;Accession: E97707
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C;Superfamily: O-sialoglycoprotein endopeptidase
C;Keywords: hydrolase; metalloproteinase
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A; Residues: 1-344 < KUR>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 125;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     39 VLGIETSCODTAAAVVDETGNVLGEAIHSQTEVHLKTGGIVPPAAQQLHRENIQRIVQEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                         ILSSAADIAATVQHTMACHLVKRTHRAILFCKQ-RDLLPQNNAVLVASGGVASNFYIRRA 336
                                                                                                                                                                                                                                                                       MSGGKAI EHLAKQGNRFHFDI KPPLHHAKNCDFSFTGLQHVTDKI IMK-KEKEEGI EKGQ
                                                                                                                                                                                                                                                                                                             DNIPYPYLLLLASGGHCQFVAVLGLGKYKILGSTIDDAVGEAFDKVAKMLNL-----A
                                                                                                                                                                                                                                                                                                                                                                                                             LSASGVSPSDLSAIATTIKPGLALSLGVGLSFSLQLVGQLKKPPIPIHHMEAHALTIRLT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KCPLGVDISKE 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ARLTDGLSFPYLMLLVSGGHTQLVLVRGVGEYERWGTTIDDALGEAFDKTAKLLGL-PYP
                                                                                                               LEILTNATQCTLLCPPPRLCTDNGIMIAWNGIER 370
                                                                                                                                                     ----INDIAASFQFTIGEILSSKVQDAIRAYEQITNNFDKKN--IVIAGGVAANKYLQKI
                                                                                                                                                                                                                                 FPGGPEIEKRAKLGDPHKYKFPKPIINSGNCNMSFSGLKTAVRTLIMTLKEINDTV----
                                                                                                                                                                                                                                                                                                                                                                                       LKESNTKLTDISTIAATSGPGLIGGVIVGSMFARSLSSALKKPFIAINHLEGHALTARLT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ILGIESSCODTAVSIITENREILSNIIISQNTEHAVFGGVVPEIAARSHLSHLDKALKNV 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RSRWPLDGSAE
                                                                           LSSCAKTYGYRLIYPPIHLCTDNAAMIAYAGLER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SNFYIRRALEILTNATQCTLLCPPPRLCTDNGIMIAWNGIERLRAGLGILHDIEGIRYEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EGIEKGQILSSAADIAATVQHTMACHLVKRTHRAILFCKQRDLLPQNNA--VLVASGGVA 328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IRLTNKVEFPFLVLLISGGHCLLALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ANQEIRQTLQALCDTHGFRFVAPPHRLCTDNAAMIAWAGLERMAEG----RQADALEVAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----FPHINGEPALVVAGGVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ECSTMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGL----QHVTDKIIMKKEKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGPAVENAAAKGDPDRFPLPRPMVGEARLDFSFSGLKTAVRQAATAIAPLSEQD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 540.5; DB 2; Pred. No. 4.9e-36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches 132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fournier, P.E.; Barbe, V.; Samson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PID:g15619097; GSPDB:GN00173
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A; Gene: CC0071
C; Superfamily:
                                                                                                                                                                                    R;Nierman, W.C.; Feldblyum, T.V.; Paulsen, I.T.; Nelson, K.E.; Eisen, J.; Heidelberg, B.; Laub, M.T.; DeBoy, R.T.; Dodson, R.J.; Durkin, A.S.; Gwinn, M.L.; Haft, D.H.; Koln, J.; Ermolaeva, M.; White, O.; Salzberg, S.L.; Shapiro, L.; Venter, J.C.; Fraser, C. Proc. Natl. Acad. Sci. U.S.A. 98, 4136-4141, 2001
A;Title: Complete Genome Sequence of Caulobacter crescentus.
A;Reference number: A87249; MUID:21173698; PMID:11259647
A;Accession: P87257
                                                                                                                                                                                                                                                                                                                                                                                                    peptidase M22 family protein [imported] - Caulobacter crescentus C;Species: Caulobacter crescentus C;Date: 20-Apr-2001 #text_change 10-May-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
P87257
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C;Superfamily: O-sialoglycoprotein endopeptidase
C;Keywords: hydrolase; metalloproteinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      O-sialoglycoprotein endopeptidase (EC 3.4.24.57) [imported] - Brucella melitensis (straic, Species Brucella melitensis (straic, Species Brucella melitensis (c; Species Brucella melitensis C; Date: 01-Feb-2002 #sequence_revision 01-Feb-2002 #text_change 15-Feb-2002 C; Accession: AB3274
R; Accession: AB3274
R; Delvecchio, V.G.; Kapatral, V.; Redkar, R.J.; Patra, G.; Mujer, C.; Los, T.; Ivanova, R; Pellvecchio, V.G.; Kapatral, V.; Redkar, R.J.; Patra, G.; Mujer, C.; Los, T.; Ivanova, F.; Mazur, M.; Goltsman, E.; Selkov, E.; Elzer, P.H.; Hagius, S.; O'Callaghan, D.; Letes: Proc. Natl. Acad. Sci. U.S.A. 99, 443-448, 2002
A;Title: The genome sequence of the facultative intracellular pathogen Brucella melitens
                                                                                                          A; Molecule type: DNA
A; Residues: 1-367 <STO>
                                                                                                                                                                                                                                                                                                                                                                                      C; Accession:
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                                                        C;Genetics:
                                                                              A;Cross-references: GB:AE005673; NID:g13421168; PIDN:AAK22058.1; GSPDB:GN00148
                                                                                                                                                          A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Experimental source: strain C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: DNA
A; Residues: 1-359 < KUR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Reference number: AD3252; PMID:11756688
A;Accession: AB3274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Gene: BMEI0175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Cross-references:
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                              CC0071
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     132;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                39 VLGIETSCDDTAAAVVDE----TGNVLGEAIHSQTEVHLKTGGIVPPAAQQLHRENIQRI
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SNFYIRRALEILTNATQCTLLCPPPRLCTDNGIMIAWNGIER 370
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VDRALNDAGLKLYEVDAVAATAGPGLIGGLIVGLMTAKALAMAAQKPFYAVNHLEGHALT
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  O-sialoglycoprotein endopeptidase
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -GPAVERMALQGDQKRFALPRPLKGEARLDFSFSGLKTAVRQTATELVPLTDQ-
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Best Local Similarity

25.2**%**; 37.9**%**;

Score 535.5; DB 2; Pred. No. 1.4e-35;

Length

367;

Query Match

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RESULT 8
T18825
hypothetical protein C01G10.10 - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 17-Mar-2000
C;Accession: T18825
R;Matthews, L.
submitted to the EMBL Data Library, October 1996
A;Reference number: Z19027
A;Accession: T18825
                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Map position: 5
A;Introns: 31/2; 72/3; 122/2; 177/1; 272/3; 315/1; 353/2 C;Superfamily: O-sialoglycoprotein endopeptidase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Status: preliminary; translated from A;Molecule type: DNA A;Residues: 1-421 <WIL>
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A;Gene: CESP:C01G10.10
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                   25
                                                                                                                                                                                                                                                                                                                                                                                                                                               h 24.7%; Score 524; DB 2; Length 421; Similarity 33.4%; Pred. No. 1.4e-34; 30; Conservative 77; Mismatches 146; Indels
                                                                                                                                                                                                   DDSVRFPFSAVLLSGGHALISVAEDVEKFKLYGQSVSGSPGECIDKVARQLGDL-GSEFD
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                                                                                                                   GIHVGAAVEILASRASADGHLRYPIFLPNVPKANMNFDQIKGSYLNLLERLRKNSETSID
                                                                                                                                                                                                                                                                                                                         LSASGVSPSDLSAIATTIKPGLALSLGVGLSFSLQLVGQLKKPFIPIHHMEAHALTIRLT 158
                                                                                                                                                                                                                                                                                                                                                                   VLGIETSCDDTAVAIVNEKREILSSERYTERAIQRQQGGINPSVCALQHRENLPRLIEKC 84
                                                                                                                                                                                                                                                                                                                                                                                                         VLGIETSCDDTAAAVVDETGNVLGEAIHSQTEVHLKTGGIVPPAAQQLHRENIQRIVQEA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  I AAEAVRAAGVGFGDLDGVAATAGPGLVGGVMVGLAFGKAVALARGAPLVAVNHLEGHAV
                                                                                                                                                           TMSGGKAIEHLAKQGN---RFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIE
                                                                                                                                                                                                                                           -NKVEFPFLVLLISGGHCLLALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECS
                                                                                                                                                                                                                                                                                     LNDAGTSPKDLDAVAVTVTPGLVIALKEGISAAIGFAKKHRLPLIPVHHMRAHALSILLV 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -----ARRDLAAGVQAAIARQLSERVDRAMKLYK--DSHDPEDLRFVVAGGVAANGAV
RALEILTNATQCTLLCPPPRLCTDNGIMIAWNGIERLRAGLGILHDIEGIRYEP-----
                                                                           KGQILSSAADIAATVQHTMACHLVKRTHRAILFCKQRDLLPQNNAVLVASGGVASNFYIR 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                   -IPDFCASLQNTVARHISSKLHIFFESLSEQEKLPKQ---LVIGGGVAANQYIF 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGPALEKLAVGGDPTRYALPRALLGRKDCDFSFSGLKTAAARIAETLTTDD---
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C;Superfamily: O-sialoglycoprotein endopeptidase
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Title: The complete genome of the hyperthermophilic bacterium A;Reference number: A70300; MUID:98196666; PMID:9537320 A;Accession: G70369
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C;Date: 08-May-1998 #sequence_revision 08-May-1998 #text_change 09-Jul-2004
C;Accession: G70369
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Best Local Similarity
Matches 130; Conserv
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                                                                       LTNATQ---CTLLCPPPRLCTDNGIMIAWNGIERLRAGLGILHDIEGIRYEPKCPL 392
                                                                                                                                                                                                                             SSAADIAATVOHTMACHLVKRTHRAILFCKQRDLLPQNNAVLVASGGVASNFYIRRALEI 339
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                                                                                                                                                                                                                                                                                                                     -GGPIIDRLAKEGKKL-YPLPKPLMEEGNLNFSFSGLK---TAILNLLKKEKNVRK----
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A;Title: Complete genome s A;Reference number: A82950 A;Accession: H83572 A;Status: preliminary A;Molecule type: DNA Nature 406, 959-964, 2000 enome sequence of Pseudomonas aeruginosa A82950; MUID:20437337; PMID:10984043 PA01, an opportunistic

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A;Title: Complete genome sequence of enterohemorrhagic Escherichia coli O157:H7
A;Reference number: A99629; MUID:21156231; PMID:11258796
A;Accession: C91122
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-337 < CHAY>
A;Cross-references: GB:BA000007; PIDN:BAB37370.1; PID:g13363420; GSPDB:GN00154
A;Experimental source: strain O157:H7, substrain RIMD 0509952
C;Genetics:
A;Gene: BCs3947
C;Superfamily: O-sialoglycoprotein endopeptidase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              probable O-sialoglycoprotein endopeptidase [imported] - Escherichia coli (strain C;Species: Escherichia coli (C;Species: Escherichia coli (C;Date: 18-Jul-2001 #sequence_revision 18-Jul-2001 #text_change 03-Aug-2001 C;Accession: C91122 C;Accession: C91122 R;Hayashi, T.; Makino, K.; Ohnishi, M.; Kurokawa, K.; Ishii, K.; Yokoyama, K.; Ha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;Hayashi, T.; Makino, K.; Ohnishi, M.; Kurokawa, K.; Ishii, K.; Yokoyama, gasawara, N.; Yasunaga, T.; Kuhara, S.; Shiba, T.; Hattori, M.; Shinagawa, DNA Res. 8, 11-22, 2001
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A;Cross-references: GB:AE004494; GB:AE004091; NID:g9946446; PIDN:AAG03969.1; GSPDB:GN001
A;Experimental source: strain PAO1
C;Genetics:
A;Gene: gcp; PA0580
C;Superfamily: O-sialoglycoprotein endopeptidase
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Best Local S
Matches 128
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Best Local Similarity
Matches 125; Conserv
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DNPPEFPFVALLVSGGHTQLISVTGIGQYELLGESIDDAAGEAFDKTAKLLGL-DYP---
                     TNKVEPPPLVILISCCHCLLALVÇGVSDFILIGKSLDIAFGDMIDKVAKKLSLIKHPECS 217
                                                                                                                         LSASGVSPSDLSAIATTIKPGLALSLGVGLSFSLQLVGQLKKPFIPIHHMBAHALTIRL-
                                                                                                                                                                    VLGIETSCDETGIAIYDDEKGLLANQLYSQVKLHADYGGVVPELASRDHVRKTVPLIQAA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKGQ
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                                                                                  LKESGLTAKDI DAVAYTAGPGLVGALLVGATVGRSLAFAWNVPAI PVHIMEGHLLAPMLE
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                                                                                                                                                                                                                                                   23.0%; Score 488.5; DB 2; 35.2%; Pred. No. 7.8e-32; tive 55; Mismatches 148;
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C;Superfamily: O-sialoglycoprotein endopeptidase
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A;Residues: 1-337 <STO>
A;Cross-references: GB.AE005174; NID:g12517643; PIDN:AAG58198.1;
A;Experimental source: strain O157:H7, substrain EDL933
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                                                                                                                                            --QTRADIARAFEDAVVDTLMIKCKRAL-----
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O-sialglycoprotein endopeptidase (BC 3.4.24.57) - C;Species: Bscherichia coli C;Date: 30-Jun-1988 #sequence revision 17-Oct-1997 C;Accession: F65094; D29049 R;Blattner, F.R.; Plunkett III, G.; Bloch, C.A.; Pe.A.; Rose, D.J.; Mau, B.; Shao, Y. Science 277, 1453-1462, 1997

A;Title:

The complete genome

sequence

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Escherichia

coli

Perna,

N.T.;

Burland,

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Riley,

**Ξ** S Escherichia

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(strain

K-12)

#text\_change

09-Jul-2004

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A;Gene: ygjD
A;Gene: ygjD
A;Rap position: 67 min
A;Rap position: 67 min
C;Superfamily: O-sialoglycoprotein endopeptidase
C;Keywords: hydrolase; metalloproteinase; zinc
C;Keywords: hydrolase; zinc (His) #status predicted
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A;Molecule type: DNA
A;Molecule type: DNA
A;Cross-references: GB:M16194; GB:X00773; NC;Genetics:
                                                                                                                          Nature 413, 848-852, 2001
A;Authors: Parry, C.; Quail, M.; Rutherford, K.; Simmonds, M.;
A;Title: Complete genome sequence of a multiple drug resistant
A;Reference number: AB0502; MUID:21534947; PMID:11677608
A;Accession: AG0892
                                                                                                                                                                                                                    C;Accession: AG0892
C;Accession: AG0892
R;Parkhill, J.; Dougan, G.; James, K.D.; Thomson, N.R.; Pickard, th. T.; Connerton, P.; Cronin, A.; Davis, P.; Davies, R.M.; Dowd,
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A;Accession: F65094
A;Status: preliminary; nucleic
A;Molecule type: DNA
 A;Gene: STY338.
C;Superfamily:
                                                  A; Molecule type: DNA
A; Residues: 1-337 < PAR>
A; Cross-references: GB:
                                                                                                                                                                                                                                                                                        probable glycoprotease [imported] - Salmoneila enterica subsp. enterica serv C;Species: Salmonella enterica subsp. enterica servorar Typhi A;Note: this species has also been called Salmonella typhi C;Date: 09-Nov-2001 #sequence_revision 09-Nov-2001 #text_change 18-Nov-2002
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AG0892
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                                                                                                           A; Status: preliminary
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                                                                                                                                                                                                                                                                                                                                                                                                                                          TMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKGQ
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O-sialoglycoprotein
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                                                        GB:AL513382;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22.8%; Score 484.5; DB 1; 35.1%; Pred. No. 1.6e-31; tive 54; Mismatches 148;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          acid
                                                        PIDN: CAD07733.1;
 endopeptidase
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PMID:3297921
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                                                        PID:g16504285;
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A;Molecule type: DNA
A;Residues: 1-337 < KUR>
A;Cross-references: GB:AL590842;
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C;Superfamily:
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                                                                                            TMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKGQ
                                                                                                                                 ENAPEFPFVALLVSGGHTQLISVTGIGEYLLLGESVDDAAGEAFDKTAKLLGL-DYP---
                                                                                                                                                                                                       LKEANLSAKDIDAVAYTAGPGLVGALLVGATIGRALAFAWGVPAVPVHHMEGHLLAPMLE
                                                                                                                                                                                                                        LSASGVSPSDLSAIATTIKPGLALSLGVGLSFSLQLVGQLKKPFIPIHHMEAHALTIRL-
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                                                                                                                                                                                                                                                                                                                                                    22.8%; Score 483.5; DB 34.6%; Pred. No. 2e-31; tive 54; Mismatches 1
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DNPPDFPFVALLVSGGHTQLISVTGIGQYELLGESIDDAAGEAFDKTAKLIGL-DYP---
AEMMQKRRGEVFYARPEFCTDNGAMIAYAGMVRFKA--GVTADL-GVTVRPRWPL
                                                                                                                                 ILSSAADIAATVOHTMACHLVKRTHRAILFCKQRDLLPQNNAVLVASGGVASNFYIRRAL
                                                                                                                                                                                ---GGPMLSKMASQGTAGRFVFPRPMTDRPGLDFSFSGLKTFAANTIRSNGDDE-----
                                                                                                                                                                                                                                                                                                                                                                   LKEAALTASDIDAVAYTAGPGLVGALLVGATVGRSLAFAWNVPAIPVHHMEGHLLAPMLE
                                        EILTNATQCTLLCPPPRLCTDNGIMIAWNGIERLRAGLGILHDIEGIRYEPKCPL
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                                                                                       -MIKCK-RALESTGFKRLVMAGGVSANRTLRAKL
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R;Parkhill, J.; Wren, B.W.; Thomson, N.R.; Titball, R.W.; Holden, M.T.G.; Prentice, M.B deno-Tarraga, A.M.; Chillingworth, T.; Cronin, A.; Davies, R.M.; Davis, P.; Dougan, G.; il, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; Whitehead, S.; Barrell, Nature 413, 523-527, 2001 A;Title: Genome sequence of Yersinia pestis, the causative agent of plague. A;Reference number: AB0001; MUID:21470413; PMID:11586360 O-sialoglycoprotein endopeptidase #sequence\_revision 02-Nov-2001 #text\_change 09-Nov-2001 PIDN: CAC89500.1; DB PID:g15978736; 2 Length 29; GSPDB:GN00175 7 G. B.

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Search Job tim	0 pb	
Search completed: November 10, 2005, 16:53:07	230QTRADIARAFEDAVVDTLAIKSKRALDQTGFKRLVIAGGVSANQTLRLK 278  337 LEILTNATQCTLLCPPPRLCTDNGIMIAWNGIERLRAGLGILHDIEGIRYEPKCPL 392	

# Protein Sequence Searches - February 2005

All of the sequence databases on ABSS have recently been updated

- accession number. permanent accession numbers. The new UniProt record may not contain the previous temporary numbers from the most recent version of UniProt. These sequences have been assigned new Please note that the curators of the UniProt database have purged some temporary accession
- accession number can be found by searching the old accession number in the UniProt Protein extension .rup) that can no longer be found in the database, the permanent record with the new Archive database (UniPARC) at: If you encounter an accession number from an older search run against UniProt (results file

http://www.pir.uniprot.org/database/archive.shtml

If you have any questions regarding this information or your results, please contact any STIC searcher.

numbers. members of the public who may encounter UniProt temporary accession include a copy of this attachment to assist any future Examiners or When submitting sequence search results for scanning into IFW, please

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Result
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Maximum DB
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 GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd
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                                             Q68XR3
GCP RICPR
GCP AICPR
QCWU47
Q7CWU5
Q7CWU6
Q7PAG7
Q92JK6
Q92JK6
Q8YJ15
Q8YY15
Q8YS15
Q960S6
Q9ABZ9
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Q7VXN4
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Q8JFW3
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Q8BLB6
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Q8fyi5
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Q6nd54
Q93170
Q6fck9
Q66986
Q7vxn4
Q6g1r3
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Q8jfr3
Q7gjfr3
Q7gji8
Q9vwd6
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brucella su
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anopheles g
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                                                                                                                    rickettsia
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	1 GCP SALTY 2 0915V7 2 06FVF1 2 08FDG6 2 07VQQ9 2 08XBK3 2 08ZXN2	23.2 23.2 23.2 23.1 23.1 23.1 23.0 23.0 35.3 23.0 35.3 23.0 35.3 23.0 35.3 23.0 35.3 23.0 35.3 23.0 35.3	492.5 492.5 4914 488.5 5	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Q7w668 bordetella Q61v10 photobacter Q7w134 bordetella Q8ww1 bradyrhizob Q7nue3 chromobacte Q9c11 pasteurella O8esi6 oceanobacti	2 Q7W668 Q61V10 2 Q7W134 2 Q79WW1 2 Q7UUE3 2 Q7CLJ1 2 Q8ESJ6		510.5 509.5 507.5 503.5 494.5	35 35 36 37 36 37

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RX Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shemmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Hopkins R.F., Jordan R., Farmer M., Rubin G.M., Hong L.,
RA Hopkins R.F., Jordan K., Farmer M., Ravavant T.L., Scheetz T.E.,
RA Hopkins R.F., Jordan R., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Hopkins R.S., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Raha S.S., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Richards S., Wadan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Hakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Waers R.M., Butterfield Y.S.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Waers R.M., Butterfield Y.S.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Waers R.M., Butterfield Y.S.,
RA Rodriguez A.C., Grim A.A., Schmutz J., Waers R.M., Schein J.E.,
RA RODRIGUE S.J., Mara M.A., Schmutz J., Schmetch A., Schein J.E.,
RA RODRIGUE S.J., Mara M.A., Schmutz J., Schmutz J., David S.J., Mara M.A.,
RODRIGUE S.J., Mara M.A., Schmutz J., Schm
                             A Strausberg R.;
Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.

L Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.

R EMBL, BEO11904; AAH11904.1; -.

R EMBL, BEO11904; AAH11904.1; -.

R MEROPS; M22.004; -.

R GO; GO:0008450; F:O-sialoglycoprotein endopeptidase activity; IEA.

R GO; GO:0008508; P:proteolysis and peptidolysis; IEA.

R GO; GO:0008508; P:proteolysis and peptidolysis; IEA.

R GO; GO:0008508; P:proteolysis and peptidolysis; IEA.

R InterPro; IPR00905; Peptidase M22.

R InterPro; IPR0090180; Peptidase M22; 1.

R PIRSF; PIRSF004537; Osialglc pptds; 1.

R PIRSF; PRO0789; OSIALOPTASE.

R PIGREAMS; TIGR00329; 9cp; 1.
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Q96EV9;
01-DEC-2001 (TrembLrel. 1
01-DEC-2001 (TrembLrel. 1
01-MAR-2004 (TrembLrel. 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences."; Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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    414 AA;
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; gcp; 1.
45122 MW;
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Last annotation updat
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    A536B333F5C6B8DD CRC64;
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                         Query Match
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Matches 412
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Best Local S
Matches 414
                                                                                                                                                                                         MEROPS; M22.004; --
Genew; HGNC:23075; OSGEPL1.
GO; GC:0008450; F:O-sialogly;
GO; GO:0008230; F:peptidase;
GO; GO:0008270; F:zinc ion b;
GO; GO:0006508; P:proteolysia
                                                                                                                                                                                                                                                                                                                                                                                    Q9H4B0 PRELIMINAN.,
Q9H4B0,
Q9H4B0,
O1-MAR-2001 (TrEMBLrel. 16, Created)
O1-MAR-2001 (TrEMBLrel. 16, Last sequence update)
O1-MAR-2004 (TrEMBLrel. 26, Last annotation updat
O1-MAR-2004 (TrEMBLrel. 26, Last annotation updat
                                                                            Protease.
SEQUENCE
                                                                                                              InterPro; IPR000905; Peptidase M22.
InterPro; IPR009180; Pept M22 Ösialgl.
Pfam; PF00814; Peptidase M22; 1.
PIRSF; PIRSF004537; Osialglc pptds; 1.
PRINTS; PR00789; OSIALOPTASE.
PRODOM; PD002367; Peptidase_M22; 1.
                                                                                                                                                                                                                                                                   Chen J.M., Fortunato M., Barrett A.J.; Submitted (OCT-2000) to the EMBL/GenBank/DDBJ EMBL; AJ295148; CAC14666.1; -.
                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                         TISSUE=Uterus;
                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=9606;
                                                                                                     TIGRFAMs; TIGR00329;
                                                                                                                                                                                        GO:0008450; F:O-sialoglycoprotein endopeptidase activity; GO:0008233; F:peptidase activity; IEA. GO:0008270; F:zinc ion binding; IEA. GO:0006508; P:proteolysis and peptidolysis; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
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                                                                            439
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                                                                            AA;
                                                                                                          Peptidase_M22; 1.
                                                                                                                                                                                                                                                                                                                                                           Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
                                                                            48040 MW;
                                   98.4%;
93.8%;
                                                                                                  gcp; 1.
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100.0%; Pred. No. 2.6e-155;
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                          <u>,</u>
                       Score 2090.5; DB 2;
Pred. No. 1.3e-152;
0; Mismatches 2;
                                                                            44849372C784E41F
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RASULT QPSHILT ID CONTROL OF CONT
RA Ota T., Suzuki Y., Nishikawa T., Otsuki T., Sugiyama T., Irie R.,
RA Ota T., Suzuki Y., Nishikawa T., Otsuki T., Sugiyama T., Irie R.,
RA Wakamatsu A., Hayashi K., Sato H., Nagai K., Kimura K., Makita H.,
RA Sekine M., Obayashi M., Nishi T., Shibahara T., Tanaka T., Ishii S.,
RA Yamamoto J., Saito K., Kawai Y., Isono Y., Nakamura Y., Nagahari K.,
RA Murakami K., Yasuda T., Iwayanagi T., Wagatsuma M., Shiratori A.,
RA Sudo H., Hosoiri T., Kaku Y., Kodaira H., Kondo H., Sugawara M.,
RA Abe K., Kamihara K., Katsuta N., Sato K., Tanikawa M., Yamazaki M.,
RA Ninomiya K., Ishibashi T., Yamashita H., Murakawa E., Omura Y.,
RA Ninomiya K., Ishibashi T., Yamashita H., Murakawa E., Takiguchi S., Watanabe M., Hiraoka S., Chiba Y., Ishida S.,
RA Ono Y., Takiguchi S., Watanabe S., Yosida M., Hotuta T., Kusano J.,
RA Musashino K., Yuuki H., Oshima A., Sasaki N., Aotsuka S.,
RA Moriya S., Komai F., Hara R., Takeuchi K., Arita M., Imose N.,
RA Moriya S., Komai F., Hara R., Takeuchi K., Arita M., Sano S.,
RA Moriya S., Momiyama H., Ichihara T., Shiohata N., Sano S.,
RA Nakagawa S., Senoh A., Mizoguchi H., Goto Y., Shimizu F., Wakebe H.,
RA Hishigaki H., Watanabe K., Kumagai A., Takemoto M., Sawakami B.,
RA Pujimori Y., Komiyama M., Tashiro H., Tanigami A., Fujiwara T.,
RA Ono T., Yamada K., Fujii Y., Ozaki K., Hirao M., Ohmori Y.,
RA Ono T., Yamada K., Fujii Y., Ozaki K., Hirao M., Ohmori Y.,
RA Matsumura K., Nakajama Y., Mizuno T., Morinaga M., Sasaki M.,
Ra Kawabata A., Hikiji T., Kobatake N., Inagaki H., Ikema Y., Okamoto S.,
RA Matsumura K., Nakajima Y., Mizuno T., Morinaga M., Sasaki M.,
Ra Kawabata A., Hikiji T., Kobatake N., Inagaki H., Sasaki M.,
Ra Kawabata A., Hakiji T., Kobatake N., Inagaki H., Sasaki M.,
Ra Kawabata A., Haka H., Watanabe M., Watanabe M., Komatsu T.,
RA Matsumura K., Nakajima Y., Mizuno T., Morinaga M., Sasaki M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q96NH5 PRELIMINARY; PRT; 364 AA.
Q96NH5.
01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE=Brain;
PubMed=14702039; DOI=10.1038/ng1285;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hypothetical protein FLJ30879. Homo sapiens (Human).
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R GO; GO:0008450; F:O-sialoglycoprotein endopeptidase act R GO; GO:0008233; F:peptidase activity; IEA.
R GO; GO:0008270; F:Zinc ion binding; IEA.
R GO; GO:0008570; P:proteolysis and peptidolysis; IEA.
R InterPro; IPR000905; Peptidase M22.
R InterPro; IPR0009180; Peptidase M22.
R Pfam; PF00814; Peptidase M22; 1.
R PINSF; PIRSF004537; Osialglc pptds; 1.
R PINTS; PR00789; OSIALOPTASE.
R PRINTS; PR00789; OSIALOPTASE.
R PRINTS; PR00789; OSIALOPTASE.
R PRINTS; PD002367; Peptidase M22; 1.
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Best Local Similarity
Matches 361; Conserv
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Q6PEB4;
Q5PEB4;
Q5-JUL-2004 (TrEMBLrel.
Q5-JUL-2004 (TrEMBLrel.
Q5-JUL-2004 (TrEMBLrel.
Q5-JUL-2004 (TrEMBLrel.
Hypothetical protein.
Mus musculus (Mouse)
SEQUENCE FROM N.A.

STRAIN-CZECH II; TISSUE-Mammary tumor;

MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.
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SEQUENCE
                                                                                                                                                                              Eukaryota; Metazoa;
Mammalia; Eutheria;
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Okumura K., Nagase T., Nomura N., Kikuchi
Nakai K., Yada T., Nakamura Y., Ohara O.,
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                                                                                                                                                                                                                                                                          (TrEMBLrel. 27, Created)
(TrEMBLrel. 27, Last sequence update)
(TrEMBLrel. 27, Last annotation update)
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H., Masuho Y., Yamashita R.,
Isogai T., Sugano S.;
of 21,243 full-length human
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Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
A Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
A Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
A Raha S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
A Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
A Willalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
A Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
A Villalon B., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
A Hahesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
Schmutz J., Myers R.M., Butterfield Y.S.,
Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; BC058172; AAH58172.1;
GO; GO:0008450; F:O-sialoglycoprotein endopeptid
GO; GO:0008270; F:zinc ion binding; IEA.
GO; GO:0006508; P:proteolysis and peptidolysis;
InterPro; IPR00905; Peptidase M22.
InterPro; IPR009100; Pept M22 Osialgl.
Pfam; PF00814; Peptidase M2; 1.
PIRSF; PIRSF004537; Osialglc pptds; 1.
PIRSF; PR007089; OSIALOPTASE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hypothetical protein. SEQUENCE 414 AA; 4
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STRAIN-CZECH
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"Generation and initial analysis of and mouse cDNA sequences.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (SEP-2003) to the
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                                                                  THRAILFCKQRDLLPQNNAVLVASGGVASNFYIRRALBILTNATQCTLLCPPPRLCTDNG
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THRAILFCKQKNLLSPANAVLVVSGGVASNLYIRKALBIVANATQCTLLCPPPRLCTDNG
                                                                                                                                                           PPLHHAKNCDFSFTGLQHYTDKIIMKKEKEEGIEKGQILSSAADIAATVQHTMACHLVKR
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Pred. No. 5.8e-133;
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ESTRAIN=C57BL/6J; TISSUE=Corpora quadrigemina;

EX STRAIN=C57BL/6J; TISSUE=C67BL/6J; TISSUE=C67BL/6J;

EX STRAIN=C57BL/6J; TISSUE=C67BL/6J;

EX STRAIN=C57BL/6J;

EX STRAIN=C5TRAIN

EX ST
                STRAIN-C57BL/6J; TISSUE-Corpora quadrigemina;
A Adachi J., Aizawa K., Akimura T., Arakawa T., Bono H., Carninci P.,
A Adachi J., Aizawa K., Hanagaki T., Hara A., Hashizume W.,
A Fukuda S., Furuno M., Hanagaki T., Hara A., Hashizume T.,
A Hayashida K., Hayatsu N., Hiramoto K., Hiraoka T., Hirozane T.,
A Hori F., Imotani K., Ishii Y., Itoh M., Kagawa I., Kasukawa T.,
A Katoh H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Koya S.,
A Kurihara C., Matsuyama T., Miyazaki A., Murata M., Nakamura M.,
A Nishi K., Nomura K., Numazaki R., Ohno M., Ohsato N., Okazaki Y.,
A Nishi K., Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H.,
Saito R., Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H.,
Sasaki D., Shibata K., Shinagawa A., Fakeda Y., Tanaka T.,
A Tagawa A., Takahashi F., Takaku-Akahira S., Takeda Y., Tanaka T.,
A Tomaru A., Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y.;
Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
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01-MAR-2003
01-MAR-2003
01-MAR-2004
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STRAIN=CS7BL/6G; TISSUE=Corpora quadrigemina;

MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;

Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., It

Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;

"Normalization and subtraction of cap-trapper-selected cDNAs to

prepare full-length cDNA libraries for rapid discovery of new genome Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Genome
[6]
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Nature 420:563-573(2002).
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STRAIN=C57BL/6J; TISSUE=Corpora quadrigemina;
MEDLINE=21085660; PubMed=11217851; DOI=10.1038/35055500;
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STRAIN=C57BL/6J; TISSUE=Corpora quadrigemina;
MEDLINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
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01-MAR-2003 (TrEMBLrel. 25, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Mus musculus adult male corpora quadrigemina cDNA, RIKEN full-i
enriched library, clone:B230219017 product:similar to PUTATIVE
SIALOGLYCOPROTEASE TYPE 2.
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STRAIN=C57BL/6J; TISSUE=Corpora
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Sciurognathi; Muridae;
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GO; GO:0008233; F:peptidase activity; IEA.
GO; GO:0008270; F:zinc ion binding; IEA.
GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
InterPro; IPR000905; Peptidase M22.
InterPro; IPR009180; Peptidase M22; InterPro; IPR009180; Peptidase M22; InterPro; PR009180; Peptidase M22; InterPro; PR009180; Peptidase M22; InterPro; PR009180; Peptidase M22; I.
PIRSF; PR00789; OSIALOPTASE.
PRODOM; PD002367; Peptidase M22; I.
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Q9DONO;
01-JUN-2001 (TrEMBLrel. 1
01-JUN-2001 (TrEMBLrel. 1
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SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEROPS; M22.004; -.
MGD; MGI:1919335; Osgepl1.
GO; GO:00008450; F:0-sialog
GO; GO:0008233; F:peptidas
GO; GO:0008270; F:zinc ion
                                                                                                             SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Whole body.
MEDLINE=99279253; PubMed=10349636;
                                                                                                                                                                                                                                                                              Name=Osgepl1;
Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TIGRFAMS; TIGR00329;
                                                             Carninci P., Hayashizaki Y.;
"High-efficiency full-length
                                                                                                                                                                                                                                   Eukaryota;
Mammalia;
                                                                                                                                                                                                  NCBI_TaxID=10090;
  SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
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                                               Enzymol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKQGNRFHFDIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LGEAIHSQTEVHLKTGGIVPPAAQQLHRENIQRIVQEALSASGVSPSDLSAIATTIKPGL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQHTMACHLVKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ALSLGVGLSFSLQLVGQLKKPFIPIHMEAHALTIRLTNKVEFPFLVLLISGGHCLLALV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LGEALHSQTQVHLKTGGIVPPVAQQLHRENIQRIVEETLSACRITPSDLSAIATTIKPGL
                                                                                                                                                                                                                                 Hetazoa;
Butheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 THRAILFCKORDLLPQNNAVLVASGGVASNFYIRRALEILTNATQCTLLCPPPRLCTDNG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PPMQNAKNCDFSFTGLQHITDKLITHKEKEEGIEKGQILSSAADIAAAVQHATACHLAKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QGVSDFLLLGKSLDTAPGDMLDKVARRLSLTKHPECSTMSGGKATEQLAKDGNRFHFTIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ALSIGVGLSFSLQLVNQFKKPFIPIHHMEAHALTIRLTNKVEFPFLVLLISGGHCLLALV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               414 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
    N.A.
                                               303:19-44 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               44927 MW;
                                                                                                                                                                                                                                 Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             85.0%;
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17,
26,
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                                                                                                                                                                                                                                                                                                                                              Last annotation update) whole body cDNA, RIKEN 0001M19 product:similar
                                                                                                                                                                                                                                                                                                                                                                                                                   Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                             Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 1827;
Pred. No. 2
                                                                    cDNA cloning.";
                                                                                                                                       body;
                                                                                                                                                                                                                                 Craniata; Ver
Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9A2D27B576C7DB24 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                    DOI=10.1016/S0076-6879(99)03004-9;
                                                                                                                                                                                                                                 Vertebrata;
thi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .4e-132;
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                                                                                                                                                                                                                                                                                                                                                   full-length
to PUTATIVE
                                                                                                                                                                                                                                      Buteleostomi;
; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              activity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       414;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IEA.
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STRAIN-C57BL/6J; TISSUE-Whole body;

A Adachi J., Aizawa K., Akahira S., Akimura T., Arai A., Aono H.,

A Adachi J., Aizawa K., Akahira S., Akimura T., Arai A., Aono H.,

A Arakawa T., Bono H., Carninci P., Pukuda S., Fukunishi Y., Furuno M.,

A Hanagaki T., Hara A., Hayatsu N., Hiramoto K., Hiraoka T., Hori F.,

I Inotani K., Ishii Y., Icoh M., Izawa M., Kasukawa T., Kato H.,

I Inotani K., Ishii Y., Icoh M., Izawa M., Kasukawa T., Kato H.,

Kawai J., Kojima Y., Konno H., Kouda M., Koya S., Kurihara C.,

A Matsuyama T., Miyazaki A., Nishi K., Nomura K., Numazaki R., Ohno M.,

Okazaki Y., Okido T., Owa C., Saito H., Saito R., Sakai C., Sakai K.,

Okazaki Y., Okido T., Owa C., Saito H., Saito R., Sakai C., Sakai K.,

A Okazaki Y., Okido T., Owa C., Saito H., Saito R., Sakai T.,

A Okazaki Y., Shibata K., Shibata Y., Shinagawa A., Shiraki T.,

A Sogabe Y., Suzuki H., Tagami M., Tagawa A., Takahashi F., Tanaka T.,

A Sogabe Y., Suzuki H., Tagami M., Tagawa A., Takahashi F., Tanaka T.,

A Tejima Y., Toya T., Yamamura T., Yasunishi A., Yoshida K., Yoshino M.,

Bubmitted (JUL-2000) to the EMBL/GenBank/DDBJ databases.

EMBL; AKOll265 BAB27506.1; -.
                                   Query Match
      Matches
                                                                                                                                                                                                                                                                        MEROPS; M22.004; ...

MGD; MGI:1919335; Osgepll.

GO; GO:0008450; F:O-sialoglycoprotein endopeptidase activity; IEA.

GO; GO:000823; F:peptidase activity; IEA.

GO; GO:0008270; F:zinc ion binding; IEA.

GO; GO:0008270; F:zinc en binding; IEA.

InterPro; IPR009105; Peptidase M22; InterPro; IPR009106; Peptidase M22; In
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN=C57BL/6J; TISSUE=whole body;

MEDLINE=20530913; PubMed=11076861; DOI=10.1101/gr.152600;

Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P.,

Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M.,

Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A.,

Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K.,

Fujiwake S., Inoue K., Togawa Y., Izawa M., Ohara B., Watahiki M.,

Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J.,

Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.;

"RIKEN integrated sequence analysis (RISA) system-384-format

sequencing pipeline with 384 multicapillary sequencer.";

Genome Res. 10:1757-1771(2000).
                                                                                                                                                                                         PRINTS; PR00789; OSIALOPTĀSE
ProDom; PD002367; Peptidase N
TIGRPAMs; TIGR00329; gcp; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN=C57BL/63; TISSUE=Whole body;

MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;
Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., It
Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;

"Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new ge
Genome Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  runcional annotation of a full-length mouse cDNA collection.";
Nature 409:685-690(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the RIKEN Genome Exploration Research Group Phase I & II Team; "Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs."; Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN=C57BL/6J; TISSUE=Whole The FANTOM Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
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      351;
                                   Similarity
                                                                                                                                  414
      Conservative
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; PubMed=11217851; DOI=10.1038/35055500;
                                                                                                                                                                                                                       Peptidase_M22; 1.
                                                                                                                                  44999 MW;
                                85.6%;
   23;
                             Score 1819;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    body;
                                                                                                                                  999BC689944DDB24 CRC64;
   Mismatches
                                DB 2;
.9e-132;
   40;
                                                          Length 414;
   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Carninci P.,
ç
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Gaps
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                                                                                                                                                                                                                                   RX PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Pahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA Mhiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Rakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RA Krzywinski M.I., Skalska U., Smailus D.B., Schnerch A., Schein J.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q6AYN7;
Q6AYN7;
25-OCT-2004
Submitted (AUG-2004) to the EMBL/GenBank/NDRJ databases.
EMBL; BC078974; AAH78974.1; -.
GO; GO:0008450; F:O-sialoglycoprotein endopeptidase activity; IEA.
GO; GO:0008270; F:zinc ion binding; IEA.
GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25-OCT-2004 (TrEMBLrel. 28, Crea 25-OCT-2004 (TrEMBLrel. 28, Last 25-OCT-2004 (TrEMBLrel. 28, Last thypothetical protein (Fragment).

Rattus norvegicus (Rat).
                                                                                               Director MGC Project;
                                                                                                                                  SEQUENCE FROM
                                                                                                                                                                                           and mouse
                                                                                                                    TISSUE=Testis;
                                                                                                                                                                                                                          Jones S.J., Marra M.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata;
                                                                                                                                                                                                            Generation and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
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                                                                                                                                                                        Acad.
                                                                                                                                  N.A.
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PIRSF; PIRSF004537; Osialgic pptds; 1.

PRINTS; PR00789; OSIALOPTASE.

ProDom; PD002367; Peptidase M22; 1.

TIGRFAMS; TIGR00329; gcp; 1.

PROSITE; PS00435; PEROXIDASE 1; UNKNOWN_1.

Hypothetical protein.

NON TER 467 467

SEQUENCE 467 AA; 50799 MW; 474E18B1959
                                                                                                                                                                                                                 Submitted (
MEROPS; M22.004; ...
G0; G0:0008450; F:O-sialoglycoprotein endopeptidase G0; G0:0008233; F:peptidase activity; IEA.
G0; G0:0008237; F:zinc ion binding; IEA.
G0; G0:0008270; F:zinc endopeptidolysis; IEA.
InterPro; IPR000905; Peptidase M22.
InterPro; IPR0009180; Pept M22_Ostalgl.
Pfam; PF00814; Peptidase_M22; 1.
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01-OCT-2002 (TrEMBLrel. 22, Created
01-OCT-2002 (TrEMBLrel. 22, Last se
01-MAR-2004 (TrEMBLrel. 26, Last an
SI:dZ211013.4 (Novel glycoprotease)
                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata;
Actinopterygii; Neopterygii; 7
Cyprinidae; Danio.
NCBI_TaxID=7955;
                                                                                                                                                                                                     Submitted (SEP-2003) to the EMBL/GenBank/DDBJ EMBL; AL591593; CAD43471.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                      Brachydanio rerio (Zebrafish) (Danio rerio).
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                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
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IPR002016; Peroxidase.
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Pred. No. 2e-124;
                                                                                                                                                                                                                                                                                                                                                                     ; Craniata; Vertebrata; Euteleostomi; Teleostei; Ostariophysi; Cypriniformes;
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Best Local S
Matches 242
                                                                                  Submitted (JUN-2003) to the EMBL/GenBank/DDBJ databases.

EMBL; AL672211; CAD43443.1; -.

R MEROPS; M22.004; -.

R MEROPS; M22.004; -.

R GO; GO:0008450; F:O-sialoglycoprotein endopeptidase activity; IEA.

R GO; GO:0008233; F:peptidase activity; IEA.

R GO; GO:0008270; F:zinc ion binding; IEA.

R GO; GO:0006508; P:proteolysis and peptidolysis; IEA.

R GO; GO:00065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PIRSF; PIRSF004537; Osialglc_pptds; PRINTS; PR00789; OSIALOPTASE. ProDom; PD002367; Peptidase_M22; 1. TIGRFAMs; TIGR00329; gcp; 1. Protease. SEQUENCE 404 AA; 43956 MW; 3A6B:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OBJFR7 PRELIMINARY; PRT;
OBJFR7;
OBJFR7;
O1-OCT-2002 (TrEMBLrel. 22, Created)
O1-OCT-2002 (TrEMBLrel. 22, Last so
O1-MAR-2004 (TrEMBLrel. 26, Last an
SI:dZ72B14.6 (Novel 91ycoprotease)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cyprinidae; Danio
NCBI_TaxID=7955;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Brachydanio rerio (Zebrafish)
Eukaryota; Metazoa; Chordata;
Actinopterygii; Neopterygii; T
Cyprinidae; Danio.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Name=SI:dZ72B14.6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                               Protease
                                                                  TIGRFAMS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         397
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: || ||:|||:||:
TSEVKEAAIKVPKLKL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MLHPLDFPFLVLLVSGGHSLLALAKGIDEFLLLGQTLDEAGDTLDKIARRLSLRNHPEC
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                                                                  TIGR00329;
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                                                               Peptidase_M22;
29; gcp; 1.
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a; Craniata;
; Teleostei;
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Pred. No. 1
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ta; Vertebrata; Euteleostomi;
ei; Ostariophysi; Cypriniform
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             404
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44027

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6FE98653A651860F CRC64;

Query Match Best Local Similarity

60.2%;

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RESULT
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Query Match
Best Local S
Matches 165
                                                                                                                                              GO; GO:0008450; F:O-sialoglycoprotein endopeptidase ac GO; GO:0008270; F:zinc ion binding; IEA.
GO; GO:0006208; P:proteolysis and peptidolysis; IEA.
InterPro; IPR00905; Peptidase M22.
InterPro; IPR009180; Pept M22_Osialgl.
Pfam; PF00814; Peptidase M22; 1.
Pfam; PF00814; Peptidase M22; 1.
PIRSF; PIRSF004537; Osialglc_ptds; 1.
PRINTS; PR00789; OSIALOPTASE.
ProDom; PD002367; Peptidase M22; 1.
TIGRFAMS; TIGR00329; gcp; 1.
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Q7Q918;
01-MAR-2004 (TrEMBLrel. 26, C
01-MAR-2004 (TrEMBLrel. 26, L
01-MAR-2004 (TrEMBLrel. 26, L
                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN-PEST;
Anopheles Genome Sequencing Consortium;
Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.
-!- CAUTION: The sequence shown here is derived from an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Anopheles gambiae str. PEST.
Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Meoptera; Endopterygota; Diptera; Nematocera; Culicoidea; Anopheles.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AgCP14990 (Fragment)
Name=agCG46164; ORFI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                 NON_TER
                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                            preliminary data.
L; AAAB01008900; EAA09387.1; -.
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     Conservative
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                          42.7%;
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Last annotation update)
                          Score 772.5; DB 2;
Pred. No. 4.2e-51;
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                                                                                                       CC9426723D3FD4F1 CRC64;
Mismatches
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RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N., RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N., RA George R.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X., RA Brandon R.C., Rogers Y.H., Blazej R.G., Champe M., Pfeiffer B.D., RA Wan K.H., Doyle C., Baxter E.G., Helt G., Welson C.R., Gabor G.L., RA Wan K.H., Doyle C., Baxter E.G., Helt G., Welson C.R., Gabor G.L., RA Berson R.Y., Benso P.V., Bernan B.P., Bhandari D., Bolshakov S., RA Beeson K.Y., Benso P.V., Berman B.P., Bhandari D., Bolshakov S., RA Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P., RA Berson K.Y., Benso P.V., Berman B.P., Bhandari D., Bolshakov S., RA Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P., RA Gertery J.M., Cawley S., Dahlke C., Davenport L.B., Davies P., RA de Pablos B., Delcher A., Deng Z., Mays A.D., Dew I., Dietz S.M., RA Durbin K.J., Evangelista C.C., Ferraz C., Ferriera S., Fleischmann W., RALDIN K.J., Evangelista C.C., Ferraz C., Ferriera S., Fleischmann W., RALDIN K.J., Gabrielian A.E., Garg N.S., Gelbart W.M., Glasser K., RA Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M., Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M., Kalush F., Karpen G.H., Ke Z., Kennison J.A., Ketchum K.A., Alali M., Kalush F., Karpen G.H., Ke Z., Kennison J.A., Ketchum K.A., Alasko P., Lei Y., Levitsky A.A., Li J., Li Z., Liang Y., Lin X., RA Merkolov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A., RA Merkolov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A., RA Merkolov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A., RA Palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
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Q9VWD6
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Q9VWD6;
01-MAY-2000
01-MAY-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Drosophila melanogaster (Fruit fly).

Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;

Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORFNames=CG14231;
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Best Loc
Matches
                                                                                                         GO; GO:0008450; F:O-sialaglycoprotein endopeptid GO; GO:0008450; F:O-sialaglycoprotein endopeptid GO; GO:0008508; F:zotacion binding; IEA.
GO; GO:0006508; P:proteclysis and peptidolysis; InterPro; IPR009905; Peptidase M22.
InterPro; IPR0099180; Peptidase M22.
Pfam; PF00814; Peptidase M22; 1.
PIRSF; PIRSF004537; Osialaglc_pptds; 1.
PRINTS; PR00799; OSIALOPTASE.
ProDom; PD002367; Peptidase_M22; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Science [2]
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                                                                                                                                                                                                                                                                                           Submitted (MAR-2004) to the EMBL; AE003513; AAF49008.1; IntAct; Q9VWD6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=22426069; PubMed=12537572; Milburn G.H., Campbell K.S. Hradecky P., Huang Y., Kaminker J.S., Millburn G.H., Prochnik S.I. Smith C.D., Tupy J.L., Whitfied B.J., Bayraktaroglu L., Berman B Bettencourt B.R., Celniker S.E., de Grey A.D., Drysdale R.A., Harris N.L., Richter J., Russo S., Schroeder A.J., Shu S.Q., Stapleton M., Yamada C., Ashburner M., Gelbart W.M., Rubin G.M.,
                                                                         ProDom; PD002367; Pe
TIGRFAMs; TIGR00329;
SEQUENCE 409 AA;
                                                                                                                                                                                                                                                                                                                                                  FlyBase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=22426070; PubMed=12537573;
Kaminker J.S., Bergman C.M., Kronmiller B., C:
Patel S., Frise E., Wheeler D.A., Lewis S.E.,
Ashburner M., Celniker S.E.;
                                                                                                                                                                                                                                                                         IntAct; Q9VWD6; -. FlyBase; FBgn0031060; CG14231.
                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
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MEDLINE=22426065; PubMed=12537568;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     genomics perspective.";
enome Biol. 3:RESEARCH0084-RESEARCH0084(2002).
                      Local Similarity
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Score 714.5; DB 2;
Pred. No. 1.3e-46;
0; Mismatches 140;
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                                                                             9797F66E7D155538 CRC64;
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                                                                                                                                                                                                                                                          endopeptidase activity; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                euchromatic genome:
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   Indels
                                     Length
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   15;
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   Gaps
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VLGIETSCDDTAAAVVDETGNVLGEAIHSQTEVHLKTGGIVPPAAQQLHRENIQRIVQEA

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RESULT 12

O2214

ID 02214

AC 02214

AC 0214

AC 01-JA

DT 01-JA

DT 01-JA

DT 01-JA

DT 01-JA

DT 05-JU

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Name=At2g45270; Synonyms=GCP1;
Arabidopsis thaliana (Mouse-ear cress).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eu
eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         O22145 PRELIMINARY;
O22145, Q8VML2;
O1-JAN-1998 (TrEMBLrel. 05,
O1-JUN-2002 (TrEMBLrel. 21,
O5-JUL-2004 (TrEMBLrel. 27,
                                                                                                                                                                             Yamada K., Liu S.X., Sakano H., Pham P.K., Banh J., Chung M.K., Goldsmith A.D., Lee J.M., Quach H.L., Toriumi M., Yu G., Bowser I Carninci P., Chen H., Cheuk R., Haller, Tishida J., Jones Kamiya A., Karlin-Neumann G., Kawai J., Kim C., Lam B., Lin J., Miranda M., Narusaka M., Nguyen M., Palm C.J., Sakurai T., Satou Seki M., Shinn P., Southwick A., Shinozaki K., Davis R.W., Ecker
  Yamada K., Banh J., Cl
Deng J.M., Goldsmith /
Tang C., Toriumi M., V
Carninci P., Chen H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCP1).
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Sykes S.M., Mason
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                                                                                                                                                                                                                                                                                                                                                               Submitted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (MAR-2000)
                                                                                          SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       207
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                                                                                                                                        (NOV-2001)
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                                                                   Chan M.M.,
Chan M.M., Chang C.H., Chang B., Dale J.
A.D. Lee J.M., Onodera C.S., Quach H.L
Wu H.C., Yamamura Y., Yu G., Bowser L.,
Cheuk R., Hayashizaki Y., Ishida J., J
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Kerlavage
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Last annotation update)
n endopeptidase (Sialoglycoprotease
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R., Adams
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Somerville C.R.,
                                                                     Dale J.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tracheophyta;
                                                                                                                                                                                                                                                                       ng M.K.,
Bowser L.,
                                              H.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rosids;
                                                                                                                                                                                    J.R.
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Q73H71
ID Q73H7
AC Q73H7
AC Q73H7
DT O5-JU
DT O5-JU
DT O5-JU
DT O5-JU
DT O5-Bacte
OC Ricke
OC Ricke
OC NCE1
RN NCE1
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Best Local S
Matches 154
                                                  Q73H71 PRELIMINARY; PRT; 335 AA.
Q73H71;
Q73H71;
Q73H71;
O5-JUL-2004 (TrEMBLrel. 27, Created)
O5-JUL-2004 (TrEMBLrel. 27, Last sequence update)
O5-JUL-2004 (TrEMBLrel. 27, Last annotation update)
Peptidase, M22 family protein.
OrderedLocusNames=WD0699;
Wolbachia pipientis wMel.
Bacteria; Proteobacteria; Alphaproteobacteria; Rickett
Bactetialaceae; Wolbachieae; Wolbachia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Protease.
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        G); GO:0008450; F:O-sialoglycoprotein endopeptidase activity; IEA.
GO; GO:0008233; F:peptidase activity; IEA.
GO; GO:0008270; F:zinc ion binding; IEA.
GO; GO:0008270; P:proteolysis and peptidolysis; IEA.
InterPro; IPR00905; Peptidase M22.
InterPro; IPR00905; Peptidase M22.
InterPro; IPR009180; Pept M22_Osialgl.
Pfam; PF00814; Peptidase M22; 1.
PIRSF; PIRSF004537; Osialglc_pptds; 1.
PRINTS; PR00789; OSIALOPTASE.
ProDom; PD002367; Peptidase_M22; 1.
SEQUENCE FROM N.A.
PubMed=15024419;
                                       NCBI_TaxID=66077;
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                                                                                                                                                                                                                                                                                               SNKYVRLRLNNIVENKNLKLVCPPPSLCTDNGVMVAMTGLEHFRVG----
                                                                                                                                                                                                                                                                                                                  SNFYIRRALEILTNATQCTLLCPPPRLCTDNGIMIAWNGIERLRAGLGILHDIEGIRYE-
                                                                                                                                                                                                                                                                                                                                                       CPVSSATNEDRRNRADIAASFORVAVLHLEEKCERAIDWALE
                                                                                                                                                                                                                                                                                                                                                                                                          --RSGGPAVEELALEGDAKSVKFNVPMKYHKDCNFSYAGLKTQVRLAIEAKE----IDAK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ALSASGYSPSDLSAIATTIKPGLALSLGYGLSFSLQLYGQLKKPFIFIHHMEAHALTIRL
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                                                                                                                                                                                                                                              PPPATEPEDYVYDLRPRWPLGEEYAKGRSEA 453
                                                                                                                                                                                                                                                                                                                                                                                QILSSA-----ADIAATVQHTMACHLVKRTHRAILFCKQRDLLPQNNAVLVASGGVA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Karlin-Neumann G., Kawai J., Kim C., Narusaka M., Nguyen M., Palm C.J., hinn P., Southwick A., Shinozaki K.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Peptidase_M22;
29; gcp; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  52995 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31.5%;
                                                                                                                                                                                                                                                                      PKCPLGVDISKEVGEA 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60; Mismatches 130;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 668.5;
Pred. No. 5.4
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 2;
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, Sakurai T.,
, Davis R.W.,
                                                                  Rickettsiales;
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Ecker J.R.,
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RESULT 14
Q92LH8
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Matches 128;
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GO; GO:0008450; F:O-sialoglycoprotein endopeptidase
GO; GO:0008270; F:zinc ion binding; IEA.
GO; GO:0008508; P:proteolysis and peptidolysis; IEJ
InterPro; IPR001905; Peptidase M22.
InterPro; IPR001905; Peptidase M22.
InterPro; IPR0019010; Peptidase M22; I.
Pfam; PF00814; Peptidase M22; I.
PINSF; PIRSF004537; Osialglc pptds; I.
PINSF; PR00789; OSIALOPTASE.
PRODOM; PD002367; Peptidase M22; I.
TIGRFAM6; TIGR00329; GC; I.
                                                                                                                             O92LH8 PRELIMINANX;

O92LH8;

O1-DEC-2001 (TrEMBLrel. 19, Created)

O1-DEC-2001 (TrEMBLrel. 19, Last sequence update)

O1-MAR-2004 (TrEMBLrel. 26, Last annotation update)

PROBABLE O-SIALOGLYCOPROTEIN ENDOPEPTIDASE (EC 3.4.24.57).

PROBABLE O-SIALOGLYCOPROTEIN ENDOPEPTIDASE (EC 3.4.24.57).

Rhizobium meliloti (Sinorhizobium meliloti).

Rhizobium meliloti (Sinorhizobium meliloti).
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Brownlie J.C., McGraw E.A., Martin W., Esser C., Ahmadinejad N.,
Wiegand C., Madupu R., Beanan M.J., Brinkac L.M., Daugherty S.C.,
Durkin A.S., Kolonay J.F., Nelson W.C., Mohamoud Y., Lee P.,
Berry K.J., Young M.B., Utterback T.R., Weidman J.F., Nierman W.C.,
Paulsen I.T., Nelson K.E., Tettelin H., O'Neill S.L., Eisen J.A.;
"Phylogenomics of the reproductive parasite Wolbachia pipientis wMel:
a streamlined genome overrun by mobile genetic elements.";
PLoS Biol. 2:327-341(2004).
EXMBL, ABD17258; AAS14395.1; -.
Capela D., Barloy-Hubler F., Gouzy J., Bothe G., Ampe F., Batut J. Boistard P., Becker A., Boutry M., Cadieu B., Dreano S., Gloux S., Godrie T., Goffeau A., Kahn D., Kiss B., Lelaure V., Masuy D.,
                                                STRAIN=1021;
MEDLINE=21396507; PubMed=11481430;
                                                                                       SEQUENCE FROM
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Pred. No. 3.
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                                                DOI=10.1073/pnas.161294398;
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A Renard C., Thebault P., Vandenbol M., Weidner S., Galibert F.;
T "Analysis of the chromosome sequence of the legume symbiont
Sinorhizobium meliloti strain 1021.";
Proc. Natl. Acad. Sci. U.S.A. 98:9877-9882(2001).
Proc. Natl. Acad. Sci. U.S.A. 98:9877-9882(2001).
R EMBL, AL591792; GAC47657.1;
R GO; GO:0016787; F:hydrolase activity; IEA.
R GO; GO:0008450; F:o-sialoglycoprotein endopeptidase activity; I
R GO; GO:0008470; F:zinc ion binding; IEA.
R GO; GO:0008270; F:zinc ion binding; IEA.
R GO; GO:0008508; P:proteolysis and peptidolysis; IEA.
R InterPro; IPR000905; Peptidase M22.
InterPro; IPR009180; Pept M22.
R InterPro; IPR009180; Peptidase M22.
R Pfam; PF00814; Peptidase M22; 1.
R PIRSF; PIRSF004537; Osialglc_pptds; 1.
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Q98EI6;
01-OCT-2001
01-OCT-2001
01-MAR-2004
STRAIN=MAFF303099;
MEDLINE=21082930; PubMed=11214968;
Maneko T., Nakamura Y., Sato S., Asamizu E., Kato T., Sasan Watanabe A., Idesawa K., Ishikawa A., Kawashima K., Kimura Kishida Y., Kiyokawa C., Kohara M., Matsumoto M., Matsuno J
                                                                                                                                                                                                                                                         O-sialoglycoprotein endopeptidase (Gcp).
OrderedLocusNames=mlr4224;
Rhizobium loti (Mesorhizobium loti).
Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales;
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Complete proteome; Hydrolase.
SEQUENCE 360 AA; 37906 MW;
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ProDom; PD002367; Peptidase_M22; 1.
                                                                                                                                           SEQUENCE
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(TrEMBLrel. 18, Last sequence update)
(TrEMBLrel. 26, Last annotation update)
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Best Local Similarity
Matches 145; Conserv
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pIRSF; PIRSF004537; Osialglc pptds;
PRINTS; PR00789; OSIALOPTASE.
ProDom; PD002367; Peptidase M22; 1.
TIGRPAMs; TIGR00329; gcp; 1.
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Takeuchi C., Yamada M.,
"Complete genome structi
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                     GVDISKEVGEASIKVPQL
                                            IRRALEILTNATQCTLLCPPPRLCTDNGIMIAWNGIERLRAGLGILHDIEGIRYEPKCPL
                                                                                        PLGD--QDVADI CASFQAAVADALADRVSRALARFSQ--TFPGTKNPALVVAGGVAANHT
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Yamada M., Tabata S.;
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Search completed: November 10, 2005, 16:52:01 Job time: 110.35 secs

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Score
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1 MLILTKTAGVFFKPSKRKVY......DISKEVGEASIKVPQLKMEI 414
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Maximum Match 100%
Listing first 45 summaries
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US-10-067-443-3
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US-10-067-43-28
US-10-067-43-28
US-10-067-43-27-26
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US-09-134-000C-4956
US-09-134-001C-3909
US-09-134-001C-3909
US-09-134-001C-3909
US-09-134-001C-3909
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; LENGTH: 414
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-067-443-2
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Patent No. 6642041

GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED
TITLE OF INVENTION: SPINAL CORD, MP-1
FILE REFERENCE: D0073 NP
CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR APPLICATION NUMBER: US 60/268,814
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOFTWARE: Patentin version 3.0
SEQ ID NO 2
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                       PPLAHAKNCDFSFTGLQHVTDKI IMKKEKEEGIEKGQILSSAADIAATVQHTMACHLVKR
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PPLHHAKNCDPS FTGLQHVTDKT IMKKEKEEGI EKGQILSSAADI AATVQHTMACHLVKR
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GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED
                                                               Sequence 22, Application US/10067443 Patent No. 6642041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: PatentIn version 3.0 SEQ ID NO 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 412; Conservative
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Best Local Similarity 93.8%;
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TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED
TITLE OF INVENTION: SPINAL CORD, MP-1
FILE REFERENCE: D0073 NP
CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR FILING DATE: 2001-04-10
NUMBER: OF SEQ ID NOS: 71
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Patent No. 6642041
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TYPE: PRT
ORGANISM: homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 2090.5; DB 4;
Pred. No. 1.4e-230;
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CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR PILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOPTWARE: Patentin version 3.0
SEQ ID NO 22
PRIOR FILING SECTION NUMBER: US 60/282,814
                                                                                                                                                                                                                                                                             FILE REFERENCE: D0073 NP
CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OP SEQ ID NOS: 71
SOPTWARE: PatentIn version 3.0
SEQ ID NO 3
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APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLECTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED
TITLE OF INVENTION: SPINAL CORD, MP-1
                                                                                                                         Query Match 29.8%; Score 634; DB 4; Length 463
Best Local Similarity 37.9%; Pred. No. 1.8e-63;
Matches 145; Conservative 61; Mismatches 129; Indels
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Best Local Similarity
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           98 ALSASGVSPSDLSAIATTIKPGLALSLGVGLSFSLQLVGQLKKPFIPIHHMEAHALTIRL 157
                                                 85 VVLGIETSCDDTAAAVVSPFNHLSSSC---RAELLVQYGGVAPKQAEEAHSRVIDKVVQD 141
                                                                                     38 IVLGIETSCDDTAAAVVDETGNVLGEAIHSQTEVHLKTGGIVPPAAQQLHRENIQRIVQE 97
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Gaps

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RESULT 6
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US-10-067-443-25
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TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A I
TITLE OF INVENTION: SPINAL CORD, MP-1
FILE REFERENCE: D0073 NP
CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT APPLICATION NUMBER: US 60/266,518
PRIOR APPLICATION NUMBER: US 60/26,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOFTWARE: PatentIn version 3.0
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            GENERAL INFORMATION:
APPLICANT: Dristol-Wyers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED
TITLE OF INVENTION: SPINAL CORD, MP-1
                                                                                     Sequence 4, Application US/10067443 Patent No. 6642041
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LENGTH: 179
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Best Local Similarity
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FILE REFERENCE: D0073
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Pred. No. 2e-54;
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GENERAL INFORMATION:
APPLICANT: BRISCOL-MYSCRE SQUIDD COMPANY
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A N
TITLE OF INVENTION: SPINAL CORD, MP-1
FILE REFERENCE: D0073 NP
CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR APPLICATION NUMBER: US 60/262,814
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOPTWARE: PatentIn version 3.0
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                                                                                                                                                                                                                                                                           SEQ ID NO 28
LENGTH: 421
TYPE: PRT
Query Match
Best Local Similarity
Matches 130; Conserv
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SEQ ID NO 4
LENGTH: 421
TYPE: PRT
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CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
                                                                                                                                                                                                                                      ORGANISM: Caenorhabditis elegans
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          335 RALEILTNATQCTLLCPPPRLCTDNGIMIAWNGIERLRAGLGILHDIEGIRYEP-----
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    24.7%; Score 524; DB 4;
33.4%; Pred. No. 6.3e-51;
7ative 77; Mismatches 146
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33.4%; Pred. No. 6.3e-51;
tive 77; Mismatches 146; Indels
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                                                                                          Length 421;
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APPLICANT: GATY L. Breton et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO MORAXELLA
TITLE OF INVENTION: FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 2709.2005-001
CURRENT APPLICATION NUMBER: US/09/540,236
CURRENT FILING DATE: 2000-04-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS: 3840
SEQ ID NO 2726
LENGTH: 350
TYPE: PRT
ORGANISM: M.catarrhalis
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Similarity 34.5%; Pred. No. 2e-48;
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                                                                                                                                                                        PLIASDDPPSFPFVCLIVSGGHTMLVRADGVGVYQIIGESIDDAVGECFDKTAKMLKL-P
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IRRALEILTNATQCTLLCPPPRLCTDNGIMIAWNGIERLRAG-
                                                                                                       YP-----GGPNIEKLAKNGNPHAYELPRPMQH-KGLDFSFSGMKTAIHNLIKDTPNAQS
                                                                                                                                                                                                             IRLT--NKVEFPFLVLLISGGHCLLALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIK 212
                                                                                                                                                                                                                                               FNEMLDQANITKSDIDAVAYTKGPGLIGALMTGALFGRTLAYGLGVPAVGVHHMEGHLLA
                                                                                                                                                                                                                                                                              VQEALSASGVSPSDLSAIATTIKPGLALSLGVGLSFSLQLVGQLKKPFIPIHHMEAHALT 154
                                                                                                                                                                                                                                                                                                                  VLGLETSCDETGLAIYDSTMNGRGGVLSQVLYSQINLHATYGGVVPELASRDHIRKLVPL
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                                    ATRADIAASFEYAVVDTLVKKCTKALQMTGIRQ---
                                                                                                                                                                                                                                                                                                                                                                                         56;
                                                                                                                                                                                                                                                                                                                                                                                         Mismatches 139;
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US-09-252-991A-17372
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US-08-087-797-3
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NUMBER OF SEQ ID NOS:
SEQ ID NO 17372
LENGTH: 401
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Patent No. 6551795
                                                                                     Sequence 3, Application Patent No. 5543312 GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: MARC J. Rubenfield et al.
APPLICANT: MARC J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR PILING DATE: 1998-02-18
PRIOR PILING DATE: 1998-07-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
APPLICANT: Mellors, Alan
APPLICANT: Lo, Reggie Y.C.
APPLICANT: Abdullah, Khalid M.
TITLE OF INVENTION: Pasteurella He
TITLE OF INVENTION: Glycoprotease
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                                                                                                                                                                                                                                                                                                                                                         RPGLDFSFSGLKTFTLN-TWQRCVEAGDDSEQ---TRCDIALAFQTAVVETLLIKCRRAL
                                                                                                                                                                                                                                                                                                                                                                                         AKNCDFSFTGLQHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQHTMACHLVKRTHRAI
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                                                                                                                           US/08087797
                       Haemolytica
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3.8e-48;
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29;

Gaps

365

305

319

245

185

150 126 90 66

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RESULT 11
US-09-543-681A-6513
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SEQUENCE CHARACTERISTICS:
LENGTH: 342 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
GENERAL INFORMATION:
APPLICANT: GARY BESTON
TITLE OF INVENTION: NUCLEIC ACID AND AHINO ACID SEQUENCES
TITLE OF INVENTION: DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 2709.1002-001
CURRENT APPLICATION NUMBER: US/09/543,681A
                                                                                                                         Sequence 6513, Application US/09543681A Patent No. 6605709
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/087,797
FILING DATE: 14-UUL-1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
ANAME: TIGHTOT TORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Layton, Jr., Samuel G.
REGISTRATION NUMBER: 22807
REFERENCE/DOCKET NUMBER: 337
TELECOMMUNICATION INFORMATION:
TELEPHONE: 704 377 1561
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
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ADDRESSEE: Bell, Seltzer,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET: 1211 -
CITY: Charlotte
CITY: No. 5543312th Carolina
"mited States
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OF SEQUENCES:
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                                                                                                                                                                                                                                                                                                                                                                                                          ---GPLLSKMAAQGTAGREVFPRPMTDRPGLDFSFSGLKTFAANTIRDNXXXXGXTDDQ 235
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                                                                RELATING
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PRIOR APPLICATION NUMBER: US 60
PRIOR FILING DATE: 199-04-09
PRIOR FILING DATE: 1999-04-09
NUMBER OF SEQ ID NOS: 8344
SEQ ID NO 6513
LENGTH: 357
TYPE: PRT
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                                                                                                                                                                                                                                                                                                                                           Sequence 2, Application US/08087797 Patent No. 5543312
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Best Local S
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                                                                                                                                                                           TITLE OF INVENTION: ITITLE OF INVENTION: CONTITLE OF INVENTION: CONTITUE OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Proteus mirabilis
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                      COUNTRY:
ZIP: 282
                                                                                            STREET: 1211 Bas
CITY: Charlotte
                                                                             STATE:
                                                                                                                  ADDRESSEB: Bell, Seltzer, I
STREET: 1211 East Morehead
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                                      28234
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                                                                               No. 5543312th Carolina
                                                                                                                                                                                                                                                     Lo, Reggie Y.C.
Abdullah, Khalid M.
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                                                           United States
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                                                                                                                                                                                                                    Glycoprotease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; Score 482.5; DB 4; 
; Pred. No. 2.8e-46; 
55; Mismatches 149;
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                                                                                                                                      Park & Gibson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 4;
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COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/087,797
FILING DATE: 14-JUL-1993
CLASSIFICATION: 435
CLASSIFICATION: 435

Floppy disk

ATTORNEY/AGENT INFORMATION:
NAME: Layton, Jr., Samuel G.
REGISTRATIÓN NUMBER: 22807
REFERENCE/DOCKET NUMBER: 337.

TELECOMMUNICATION

INFORMATION: 377 1561

3374-80

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US-09-489-039A-9221
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Matches
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PRIOR FILING DATE: 1999-01-29
NUMBER OF SEQ ID NOS: 14342
SEQ ID NO 9221
LENGTH: 343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 9221, Application US/09489039A Patent No. 6610836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                        Matches 123;
                                                                                                                                                                                                                                         Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                     FILE REFERENCE: 2709.2004001
CURRENT APPLICATION NUMBER: US/09/489,039A
CURRENT FILING DATE: 2000-01-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Gary Breton et. al
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO KLEBSIELLA
TITLE OF INVENTION: PNEUMONIAE FOR DIAGNOSTICS AND THERAPEUTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: 704 334 2014 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                        TYPE: PRT ORGANISM: Klebsiella pneumoniae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
LENGTH: 325 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      179
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                        158 TWKVEFPFLYLLISGGHCLLALVQGVSDFLLLGKSLDIAFGDMLDKVARRLSLIKHPECS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       285 AEMMKKIKGEVFYPRPQFCTDNGAMIAYTGFLRIK 319
         129
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                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                      VLGIETSCDDTAAAVVDETGNVLGEAIHSQTEVHLKTGGIVPPAAQQLHRENIQRIVQEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EILTNATQCTLLCPPPRLCTDNGIMIAWNGIERLR 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ILSSAADIAATVOHTMACHLVKRTHRAILFCKORDLLPQNNAVLVASGGVASNFYIRRAL 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ---AGVAMSKLAESGTPNRFKFPRPMTDRPGLDFSFSGLKTFAANTIKANLNENGELDEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKGQ 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ENAPEFPFVALLISGGHTQLVKVDGVGQYELLGESIDDAAGEAFDKTGKLLGL-DYP----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TNKVEFPFLVLLISGGHCLLALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECS 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LSASGVSPSDLSAIATTIKPGLALSLGVGLSFSLQLVGQLKKPFIPIHHMEAHALTIRL- 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ILGIETSCDETGVAIYDEDKGLVANQLYSQIDMHADYGGVVPELASRDHIRKTLPLIQEA
                                                                                                             LSASGVSPSDLSAIATTIKPGLALSLGVGLSFSLQLVGQLKKPFIPIHHMEAHALTIRL- 157
DNPPAFPFVALLVSGGHTQLISVTGIGQYELLGESIDDAAGEAFDKTAKLLGL-DYP---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ---TKCDIAHAFQQAV-----VDTILIKCK-RALEQTGYKRLVMAGGVSANKQLRADL 284
                                                                             LKEAGLTAKDIDAVAYTAGPGLVGALLVGATVGRALAFAWNVPAIPVHHMEGHLLAPMLE
                                                                                                                                                VLGIETSCDETGIAIYDDQQGLLANQLYSQVKLHADYGGVVPELASRDHVRKTVPLIQAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      325 amino acids
                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22.4%;
                                                                                                                                                                                                                                       22.3%;
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Pred. No. 1.5
                                                                                                                                                                                                                    Score 474.5; DB 4;
Pred. No. 2.1e-45;
1; Mismatches 152;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches 149;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1.5e-45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1;
                                                                                                                                                                                                                                                       DB 4;
                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                      Length 343;
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US-09-107-532A-6609
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Patent No. 6583275
GENERAL INFORMATION:
APPLICANT: Lynn A Doucette-Stamm
TITLE OF INVENTION: NUCLEIC ACID
ENTEROCOCCUS
                                                                                    Matches
                                                                                                          Best Local
                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: (781) 893-8277
INFORMATION FOR SEQ ID NO: 6609:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/09/107,532A
FILING DATE: 30-Jun-1998
PRIOR APPLICATION DATE:
APPLICATION NUMBER: 60/085,598
FILING DATE: 14 May 1998
APPLICATION NUMBER: 60/051571
FILING DATE: July 2, 1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME: Ariniello, Pamela Deneke REGISTRATION NUMBER: 40,489
REFERENCE/DOCKET NUMBER: GTC-012
TELECOMMUNICATION INFORMATION:
TELEPHONE: (781)893-5007
                                                                                                                                                                                          NAME/KEY: misc feature LOCATION: (B) LOCATION 1...363 SEQUENCE DESCRIPTION: SEQ ID NO: 66
                                                                                                                                                                                                                                                                                                MOLECULE TYPE: protein HYPOTHETICAL: YES ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: ASCII
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 02354
COMPUTER READABLE FORM:
MEDIUM TYPE: CD/ROM ISO9660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
ADDRESSEE: GENOME THERAPEUTICS CORPORATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES: 7310
                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             218 TMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKGQ 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        185 --- GGPMLSKMASQGTEGRFVFPRPMTDRPGLDFSFSGLKTFAANTIRSNGDDE-----
                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LAEMMOKRGGEVFYARPEFCTDNGAMIAYAGMVRLQTGA----KAELGVTVRPRWPL 337
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   --QTRADIARAFEDAVVDTLMIKCRRA---
ELILAIESSCDETSVAVVRNGTEILSNIVASQINSHKRFGGVVPEVASRHHVEQITLCLE 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STATE: Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                        TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 363 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OPERATING SYSTEM: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: Waltham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET: 100 Beaver Street
                                                                                                                                                                                                                                                                              ORGANISM: Enterococcus faecium
                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY: linear
                                                                                                        22.2%;
                                                                                 59;
                                                                                    Score 472; DB 4;
Pred. No. 4.5e-45;
9; Mismatches 123
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AND AMINO ACID SEQUENCES RELATING TO
FAECIUM FOR DIAGNOSTICS AND THERAPEUTICS
                                                                                                                                                                                              6609:
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                                                                                                                            Length 363;
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US-08-987-121A-4
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                                                                                                                                                                                                 US-08-987-121A-4
                                                                                                                               Query Match 21.7%;
Best Local Similarity 34.5%;
Matches 116; Conservative 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 4, Application:
                                                                                                                                                                                                                                                                                                                                                                                                        MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Ve
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/987,121A
FILING DATE:
CLASSIFICATION: 435
                                                                                                                                                                                                                                                             TELEPHONE: 317-276-333
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 336 amino acid
                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: Webster, Thomas D.
REGISTRATION NUMBER: 39,872
REFERENCE/DOCKET NUMBER: X-
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Tang, Joseph Chiou-Chung
APPLICANT: Treadway, Patti Jean
TITLE OF INVENTION: Streptococcus Pneumoniae Gene Sequence
TITLE OF INVENTION: GCp
NUMBER OF SEQUENCES: 5
CORRESPONDENCE SILILLY Corporate Center
STREET: Lilly Corporate Center
                                                                                                                                                                                                                MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZIP: 46285
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                             LENGTH: 336 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET: Lilly Corp. CITY: Indianapolis
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                  EALSASGYSPSDLGAIATTIKPGLALSIGYGLSFSLQLYGQLKKPFIPIHHWEAHALTIR 156
                                                                 RYILAFETSCDETSVAVLKNDDELLSNVIASQIESHKRFGGVVPEVASRHHVEVITACIE
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                                                                                                                                                                                                                                                                                                                                                                                                                                            US/08/987,121A
                                                                                                                               58; Mismatches 132; Indels 30;
                                                                                                                                             Score 461; DB 3;
Pred. No. 7.3e-44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Version #1.30
                                                                                                                                                            Length 336;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -QNYPVKQLVVAGGVAANQG
                                                                                                                                 Gaps
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                                                                     231 ESLST-EDLCASFQAAVMDILMAKTKKAL-----EKYPVK--TLVVAGGVAANKGLRER 281
L--ATEITDVNVIIPPLRLCGDNAGMIAYASVSEWN 315
                                LEILTNATQCTLLCPPPRLCTDNGIMIA-----WN 366
                                                                                                                                                                     STMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKG
                                                                                                    QILSSAADIAATVOHTMACHLVKRTHRAILFCKORDLLPONNAVLVASGGVASNFYIRRA 336
                                                                                                                                      -TYPAGREIDELAHOGHDI-YDFPRAMIKEDNLEFSFSGLKSAFINLHHNAE-----QKG
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Search completed: November 10, 2005, 16:54:34 Job time: 35.3 secs

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-Q-/cgn2 1/USPTO spool p/US10649273/runat 02112005 091339 15609/app query.fasta_1.1429
-DB=PUblIshed Applications NA -QFMT=fastap -SUFFIX=p2n.rnpb -MINMATCH=0.1
-LOOPCL=0 -LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=blosum62
-TRANS=human40.cdi -LIST=45 -DOCALIGN=200 -THR SCORE-pct -THR MAX=100
-THR MIN=0 -ALIGN=15 -MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0
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-MAXLEN=200000000 -USER=US10649273 WCGN 1 1034 @runat 02112005 091339 15609
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-FGAPOP=6 -FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
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Published_Applications_NA: *
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Pred. No. is the number of results predicted by chance to have score greater than or equal to the score of the result being put and is derived by analysis of the total score distribution. printed,

## SUMMARIES

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Sequence 7701, Ap Sequence 30016, A Sequence 49, Appl Sequence 51, Appl Sequence 167432, Sequence 6207, Ap Sequence 20511, A Sequence 39301, A Sequence 41977, A Sequence 3254, A Sequence 6962, Ap Sequence 6966, Ap Sequence 22020, A Sequence 27020, A Sequence 1, Appli Sequence 1, Appli Sequence 1, Appli Sequence 1, Appli	e 23, 1 e 20, 2 e 20,	on

## ALIGNMENTS

US-10-067-443-1 Sequence 1. Application US/10067443

Publication No. US20030082782A1

GENERAL IMPORMATION:
APPLICANT: Bristol-Myers Squibb Company
APPLICANT: Bristol-Myers Squibb Company
TITLE OP INVENTION: POLYNUCLECTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED
TITLE OP INVENTION: SPINAL CORD, MP-1
FILE REPERENCE: D0073 NP
CURRENT APPLICATION NUMBER: US/10/067,443

CURRENT FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR FILING DATE: 2001-02-05

PRIOR APPLICATION NUMBER: US 60/282,814

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Percent Similarity:
Best Local Similarity:
Query Match:
DB:
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NUMBER OF SEQ ID NOS: 71
SOFTWARE: PatentIn version 3.0
SEQ ID NO 1
LENGTH: 2197
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: CDS
LOCATION: (231)...(1472)
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                                                                              LeuAspLysValAlaArgArgLeuSerLeuIleLysHisProGluCysSerThrMetSer
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                                           GlyGlyLysAlaIleGluHisLeuAlaLysGlnGlyAsnArgPheHisPheAspIleLys
                                                                                                                 GlnGlyValSerAspPheLeuLeuLeuGlyLysSerLeuAspIleAlaProGlyAspMet
          ProProLeuHisHisAlaLysAsnCysAspPheSerPheThrGlyLeuGlnHisValThr 260
                                                                       CTTGACAAGGTGGCAAGAAGACTTTCTTTAATAAAACATCCAGAGTGCTCCACCATGAGT
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Sequence 1, Application US/10649273

Publication No. US20040043407A1

Publication No. US20040043407A1

Publication No. US20040043407A1

PUBLICANT: Bristol-Myers Squibb Company

ITILE OF INVENTION: POLYNUCLEOTIDE ENCODING A N

FILE REFERENCE: D0073 CNT

CURRENT APPLICATION NUMBER: US/10/649,273

CURRENT FILING DATE: 2003-08-27

PRIOR APPLICATION NUMBER: US 60/266,518

PRIOR APPLICATION NUMBER: US 10/067,443

PRIOR APPLICATION NUMBER: US 10/067,443

PRIOR APPLICATION NUMBER: US 10/067,443

PRIOR APPLICATION NUMBER: US 50/282,814

PRIOR APPLICATION NUMBER: US 60/282,814

PRIOR APPLICATION NUMBER: US 60/282,814

PRIOR FILING DATE: 2001-04-10

NUMBER OF SEG ID NOS: 71

SOFTWARE: PatentIn version 3.2

SEQ ID NO 1

LENGTH. 7107
                                                                                                                                                                                              LENGTH: 2197
; TYPE: DNA
; TYPE: DNA
; ORGANISM: Homo sap:
FEATURE:
; NAME/KEY: CDS
; LOCATION: (231)...(1)
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IleGluGlyIleArgTyrGluProLysCysProLeuGlyValAspIleSerLysGluVal
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                                        LeuValAlaSerGlyGlyValAlaSerAsnPheTyrIleArgArgAlaLeuGluIleLeu
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RESULT 3

US-10-651-722-1

Sequence 1, Application US/10651722

Publication No. US20040048302A1

GENERAL INFORMATION:

APPLICANT: Bristol-Myers Squibb Company

TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A N

FILE REFERENCE: D0073 DIV

CURRENT APPLICATION NUMBER: US/10/651,722

CURRENT FILING DATE: 2003-08-29

PRIOR APPLICATION NUMBER: US 60/286,518

PRIOR FILING DATE: 2001-02-05

PRIOR APPLICATION NUMBER: US 10/067,443

PRIOR FILING DATE: 2001-02-05

PRIOR APPLICATION NUMBER: US 60/282,814

PRIOR PILING DATE: 2001-04-10

NUMBER OF SEQ ID NOS: 71

SOFTWARE: PATENTH 2197

TYPE: DNA

ORGANISM: Homo sapiens

PENTURE:

NAMEKEY: CDS

LOCATION: (231)..(1472)

US-10-651-722-1
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RESULT 4

US-10-480-988-36

US-10-480-988-36

; Sequence 36, Application US/10480988

; Publication No. US20050069877A1

; GENERAL INFORMATION:

APPLICANT: GANDHI, Ameena R.; KABLE, Amy E.;

APPLICANT: TRAN, Bao; DUGGAN, Brendan M.;

APPLICANT: HONCHBLL, Cynthia D.; NGUYEN, Damiel B.;

APPLICANT: HONCHBLL, Cynthia D.; NGUYEN, Damiel B.;

APPLICANT: HONCHBLL, Cynthia D.; ROUYEN, Damiel B.;

APPLICANT: HONCHBLL, Cynthia D.; ROUYEN, Damiel B.;

APPLICANT: JU, Dyung Aina M.; LEE, Ernestine A.;

APPLICANT: BARROSO, Ines; RAMKUMAR, Jayalaxmi;

APPLICANT: GETIEN, Jennifer A.; LI, Joana X.;

APPLICANT: GIETZEN, Kimberly J.; DING, Li;

APPLICANT: BAUGHN, Mariah R.; BOROWSKY, Mark L.;
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APPLICANT: MASON, Patricia M.; GURURAJAN, Rajagopal,
APPLICANT: LEE, Sally; BECHA, Shanya D.;
APPLICANT: LEE, Soo'Yeun; TRAN, Uyen K.;
APPLICANT: ELLIOTT, Vicki S.; LUO, Wen;
APPLICANT: ELLIOTT, Vicki S.; LUO, Wen;
APPLICANT: LU, Yan; ZEBAXJADIAN, Yeganeh
TITLE OF INVENTION: PROTEIN MODIFICATION AND MAINTEN;
FILE REPERENCE: PF-1040 USN
FULRENT APPLICATION NUMBER: US/10/480,988
CURRENT PILING DATE: 2003-12-16
PRIOR APPLICATION NUMBER: PCT/US02/19360
PRIOR APPLICATION NUMBER: US 60/300,508
PRIOR FILING DATE: 2001-06-22
PRIOR APPLICATION NUMBER: US 60/303,445
PRIOR APPLICATION NUMBER: US 60/303,445
PRIOR APPLICATION NUMBER: US 60/303,445
PRIOR APPLICATION NUMBER: US 60/305,405
PRIOR APPLICATION NUMBER: US 60/311,442
PRIOR APPLICATION NUMBER: US 60/311,442
PRIOR APPLICATION NUMBER: US 60/314,821
PRIOR PILING DATE: 2001-08-09
PRIOR APPLICATION NUMBER: US 60/314,821
PRIOR PILING DATE: 2001-08-24
PRIOR PILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: US 60/315,992
PRIOR APPLICATION NUMBER: US 60/315,992
PRIOR APPLICATION NUMBER: US 60/378,205
PRIOR PILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: US 60/378,205
PRIOR PILING DATE: 2005-05-03
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Best Local Similarity:
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SEQ ID NO 36
LENGTH: 2572
TYPE: DNA
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NUMBER OF SEQ ID NOS: 56
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OTHER INFORMATION: Incyte ID No:
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Sequence 21, Application US/10067443
Publication No. US2030082782A1
GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A I
TITLE OF INVENTION: SPINAL CORD, MP-1
FILE REFERENCE: DO073 NP
CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT APPLICATION NUMBER: US 60/266,518
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR APPLICATION NUMBER: US 60/282,814
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; NUMBER OF SEQ ID NOS: 71
; SOFTWARE: PATENTIN VERSION 3.0
; SEQ ID NO 21
; LENGTH: 1387
; TYPE: DNA
; ORGANISM: homo sapiens
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                             GGTGGGAAAGCCATAGAGCATTTGGCCAAACAAGGAAATAGATTTCATTTTGACATCAAA
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Matches:
Conservative:
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Alignment Scores: 2.57e-243		RESULT 6 US-10-649-273-21 ; Sequence 21, Application US/10649273 ; Publication No. US20040043407A1 ; GENERAL INFORMATION: ; APPLICANT: Bristol-Myers Squibb Company ; TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE, MP-1 ; FILE REFERENCE: D0073 CNT	Oy 356 CyeThrAspAsnGlyTleMetI1eAlaTrpAsnGlyLeGinargLeNargAlaGiyLeU 3/5	316 GlnAsnAsnAlaValLeuValAlaSerGlyGlyValAlaSerAsnPheTyrlleArgArg	Oy  274GluLys 275  Oy  274GluLys 275  Db  864 CAGATAAATATTCCTGGATTGTGCCTAAAAAAAGGGAAGGTATATTTCTAATTAGTAAAGTTGAA 863  Oy  276 GlyGlnIleLeuSerSerAlaAlaAspIleAlaAlaThrValGlnHisThrMetAlaCys 295  Oy  276 GGGCAAATCCTGTCTTCAGCAGCAGACATTGCTGCAAAATACGCACACAATGGCATGT 983  Oy  296 HisLeuValLysArgThrHisArgAlaIleLeuPhoCysLysGlnArgAspLeuLeuPro 315  OH  296 CATCTTGTGAAAAGAACACATCGGGCTATTCTGTTAAGCAGAGAGACACTTGTTACCT 1043
Oy  296 HisLeuVallysArgThrHisArgAlaIleLeuPheCysLysGlnArgAspLeuLeuPro 315	Qy 241 ProProLeuHiSHiSAlaLySASnCySAspPheSerPheThrGlyLeuGlnHiSValThr 260	LeuasplysValalaargargLeuSerLeuIleLysHisProGluCysSerThrMetSer [		101 A 324 G 321 A 121 A 384 G	Db 84 GAATTTTAAGAAGTTTTAATTTCATCCTGAAACACTATTTCTTCATAAAATAGTATTG 143  Oy 41 GlyIleGluThrSerCysAspAspThrAlaAlaAlaValValAspGluThrGlyAsnVal 60

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; SEQ ID NO 21
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; ORGANISM: homo s
US-10-651-722-21
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CURRENT APPLICATION NUMBER: US/10/651,722
CURRENT FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 10/067,443
PRIOR FILING DATE: 2002-02-05
PRIOR FILING DATE: 2002-02-05
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
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US-10-651-722-21
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APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: PatentIn version 3.2
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                                                                                                 AlaSerGlyValSerProSerAspLeuSerAlaIleAlaThrThrIleLysProGlyLeu
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                                                                                                                         Sequence 1047, Application US/10887553A Publication No. US20050085436A1 GENERAL INFORMATION:
APPLICANT: Garza, Dan
APPLICANT: Li, Hao
TITLE OP INVENTION: Method to treat conditions associated
TITLE OP INVENTION: with insulin signalling dysregulation
FILE REFERENCE: 4-33262
CÜRKENT APPLICATION NUMBER: U$/10/887,553A
CURRENT FILING DATE: 2004-07-08
PRIOR APPLICATION NUMBER: 60/485,883
PRIOR FILING DATE: 2003-08-07
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; NUMBER OF SEQ ID NOS: 1208
; SOFTWARE: FastSEQ for Windows Ve
; SEQ ID NO 1047
; LENGTH: 1387
; TYPE: DNA
; ORGANISM: human
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APPLICANT: Kapeller-Libermann, Rosana
APPLICANT: Kapeller-Libermann, Rosana
APPLICANT: Kapeller-Libermann, Rosana
APPLICANT: Gluckemann, Maria A.
TITLE OF INVENTION: 38650, 28472, 5495, 65507, 81588, AND
TITLE OF INVENTION: 14354 METHODS AND COMPOSITIONS OF HUM
TITLE OF INVENTION: THEREOF
FILE REFERENCE: 381552004900
CURRENT APPLICATION NUMBER: US/10/012,140
CURRENT FILING DATE: 2001-11-08
PRIOR APPLICATION NUMBER: 60/246,768
PRIOR FILING DATE: 2000-11-08
PRIOR APPLICATION NUMBER: 60/246,772
PRIOR APPLICATION NUMBER: 60/246,772
PRIOR FILING DATE: 2000-11-08
PRIOR APPLICATION NUMBER: 60/249,185
PRIOR FILING DATE: 2000-11-15
SOPTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 6
SEQ ID NO 6
LENGTH: 1245
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                                                                        Percent Similarity:
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Query Match:
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; ORGANISM: Homo
US-10-012-140-6
                                                                                                                             Alignment Scores: Pred. No.:
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2088.00
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                                                                                                                Length:
Matches:
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APPLICANT: Leiby, Kevin R.
APPLICANT: Kapeller-Libermann, Rosana
APPLICANT: Glucksmann, Maria A.
TITLE OF INVENTION: 38650, 28472, 5495, 65507
TITLE OF INVENTION: 14354 METHODS AND COMPOSE
TITLE OF INVENTION: THEREOF
FILE REFERENCE: 381552004900
CURRENT APPLICATION NUMBER: US/10/012,140
CURRENT PAPPLICATION NUMBER: 60/246,768
PRIOR APPLICATION NUMBER: 60/246,772
PRIOR FILING DATE: 2000-11-08
PRIOR APPLICATION NUMBER: 60/249,185
PRIOR APPLICATION NUMBER: 60/249,185
PRIOR APPLICATION NUMBER: 60/249,185
PRIOR APPLICATION NUMBER: 60/249,185
PRIOR PILING DATE: 2000-11-15
NUMBER OF SEQ ID NOS: 49
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 4
LENGTH: 1820
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: CDS
LOCATION: (146)...(1390)
FEATURE:
NAME/KEY: misc feature
LOCATION: (1)...(1820)
OTHER INFORMATION: n = A,T,C or G
US-10-012-140-4
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DB:
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Best Local Similarity:
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US-10-012-140-4
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                                                                                                                                                                                                                                                                                                                                                                                                                                       No.:
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                                                                LeuGlyGluAlaIleHisSerGlnThrGluValHisLeuLysThrGlyGlyIleValPro
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Matches:
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RESULT 11
US-10-094-749-400
Sequence 400, Application US/10094749
Publication No. US20030219741A1
GENERAL INFORMATION:
APPLICANT: 1SOCAI, TAKAO
APPLICANT: SUGIYAMA, TOMOYASU
APPLICANT: OTSUKI, TETSUJI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GlyGlyLysAlaIleGluHisLeuAlaLysGlnGlyAsnArgPheHisPheAspIleLys
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APPLICANT: SATTO, HIROYUKI
APPLICANT: ISHII, SHIZUKO
APPLICANT: ISHII, SHIZUKO
APPLICANT: ISONO, YUUKO
APPLICANT: HIO, YURI
APPLICANT: HIO, YURI
APPLICANT: NAGAI, KEIICHI
APPLICANT: NAGAI, KEIICHI
APPLICANT: TAMECHIKA, ICHIRO
APPLICANT: YOSHIKAWA, TSUTOMU
APPLICANT: WAGAHARI, KENJI
APPLICANT: MASUHO, YASUHIKO
TITLE OP INVENTION: NOVEL PULL-LENGTH CDNA
FILE REFERENCE: 084335/0160
CURRENT APPLICATION NUMBER: US/10/094,749
CURRENT APPLICATION NUMBER: 60/550,435
PRIOR APPLICATION NUMBER: JO2-03-12
PRIOR APPLICATION NUMBER: G0/50,435
PRIOR APPLICATION NUMBER: JO2-01-24
PRIOR APPLICATION NUMBER: JO2-01-328381
PRIOR FILING DATE: 2001-09-14
NUMBER OP SEQ ID NOS: 3381
SOFTWARE: PACENTIN VET. 2.1
SEQ ID NO 400
LENGTH: 2208
TYPE: DNA
ORGANISM: Homo Bapiens
US-10-094-749-400
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                    ProPheIleProIleHisHisMetGluAlaHisAlaLeuThrIleArgLeuThrAsnLys
                                                                         3.65e-225
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Sequence 7447, Application US/10723860

Publication No. US20040253606A1

GENERAL INFORMATION:
APPLICANT: Aziz, Natasha
APPLICANT: Aziz, Natasha
APPLICANT: Ginsburg, Wendy M.
APPLICANT: Ziotnik, Albert
TITLE OF INVENTION: Methods of Diagnosis of Soft Tissue Sarcoma, CompTITLE OF INVENTION: Methods for Screening for Soft Tissue Sarcoma M.
FILE REFERENCE: 05882.0193.NPUS01

CURRENT APPLICATION NUMBER: US/10/723,860

CURRENT APPLICATION NUMBER: US/10/723,860

CURRENT FILING DATE: 2003-11-26

PRIOR APPLICATION NUMBER: 60/429,739

PRIOR PILING DATE: 2003-11-26

NUMBER OF SEQ ID NOS: 8393

SOPTWARE: PatentIn version 3.2
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 TYPE: DNA
ORGANISM: Homo sapiens
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NAME/KEY: misc feature
LOCATION: (646)..(657)
OTHER INFORMATION: n is
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                       ABBLVBIleIleMer.Lvef.veGluLyeGluGlvGlvIleGluLycGlyGlnIlcLcuScr
                                                                     ProProLeuHisHisAlaLysAsnCysAspPheSerPheThrGlyLeuGlnHisValThr
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SerAlaAlaAspIleAlaAlaThrValGlnHisThrMetAlaCysHisLeuValLysArg
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74 LysThrGlyGlyIleValProProAlaAla :::	cal Similarity: 99.71% Mismatches: 82.21% Indels: 18 Gaps: 18 Gaps: 19.273-2 (1-414) x US-10-120-988-177 (1-1416)	1.74e-201 1747.00 100.00%	; NAME/KEY: CDS ; LOCATION: (205)(1305) US-10-120-988-177	LENGTH: TYPE: DN ORGANISN FEATURE:	ເດ	FILE REFERENCE: 802CC CURRENT APPLICATION N CURRENT FILING DATE: PRIOR APPLICATION NUMBER 1	APPLICANT: APPLICANT: TITLE OF IN	; APPLICANT: Tang, Y. Tom ; APPLICANT: Goodrich, Ryle ; APPLICANT: Liu, Chenghua ; APPLICANT: Ren, Feiyan	US-10-120-988-177 ; Sequence 177, Application US/10120988 ; Publication No. US20030219745A1 ; GENERAL INFORMATION:	2129 GAGAAGCTTCCATAAAAGTACCACAATTAAAAATGGAGATA	2093	Db 2081 ATTATGATTGCA	Db 2021 ACAAACGCAACACAGTGCACTTTTTTTTTTTCTCCCCCCAGACTATGCACTGATAATGGC 2080  Qy 361   eMetileAlaTrpAsnGlyIeGluArgLeuArgAlaGlyLeuGlyIleLeuHisAsp 380	Db 1961 CTGGTTGCATCTGGTGGTGCTAGCTAACTTCTGTAGTCGCAAGAGCTCTGGAAACTTTA 2020  Qy 341 ThrAsnAlaThrGlnCysThrLeuLeuCysProProProProPysThrAspAsnGly 360	leLeu		Db 1841 TCAGCAGACATTGCTGCCACAGTACAGCACAATGGCATGTCATCTTGTGAAAAGA 1900
US_10-067-443-23  ; Sequence 23, Application US/10067443  ; Publication No. US20030082782A1  ; Publication No. US20030082782A1  ; GENERAL INFORMATION:  ; APPLICANT: Bristol-Myers Squibb Company  ; TITLE OF INVENTION: POLYNUCLECTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED  ; TITLE OF INVENTION: SPINAL CORD, MP-1		Qy 394 ValAspIleSerLysGluValGlyGluAlaSerIleLysValProGlnLeuLysMetGlu 413	Qy 374 GlyLeuGlyTieLeuHisAsplieGluGlyIleArgTyrGluProLysCysProLeuGly 393 	Qy 354 ArgLeuCysThrAspAsnGlyIleMetIleAlaTrpAsnGlyIleGluArgLeuArgAla 373 	Qy 334 ArgArgAlaLeuGluIleLeuThrAsnAlaThrGlnCysThrLeuLeuCysProProPro 353	Qy 314 LeuProGlnAsnAlaValLeuValAlaSerGlyGlyValAlaSerAsnPheTyrIle 333	QY 294 AlaCysHisLeuValLysArgThrHisArgAlaIleLeuPheCysLysGlnArgAspLeu 313 	QY 274 GluLysGlyGlnIleLeuSerSerAlaAlaAspIleAlaAlaThrValGlnHisThrMet 293 	Oy 254 ThrGlyLeuGlnHisValThrAspLysIleIleMetLysLysGluLysGluGlyIle 273	Qy 234 ArgPheHisPheAspIleLysProProLeuHisHisAlaLysAsnCYsAspPheSerPhe 253	Qy 214 ProGluCysSerThrMetSerGlyGlyLysAlaIleGluHisLeuAlaLysGlnGlyAsn 233	Qy 194 AspIleAlaProGlyAspMetLeuAspIysValAlaArgArgLeuSerLeuIleLysHis 213			460 CTGGTAGGACAGTTAAAAAAAGCCATTCATTCCCATTCATCATATGGAGGCTCATGCACTT	Db 400 ACTACCATAAAACCAGGACTTGCTTTAAGCCTGGGAGTGGGCTIATCATTIAGCTIACAG 422 Ov 134 LeuValGlyGlnLeuLyBLysProPheIleProIleHisHisMetGluAlaHisAlaLeu 153	Qy 114 ThrThrIleLysProGlyLeuAlaLeuSerLeuGlyValGlyLeuSerPheSerLeuGln 133

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FILE REFERENCE: D0073 NP
CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2002-02-05
FRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOFTWARE: PATENTIN VETSION 3.0
SEQ ID NO 23
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; TYPE: DNA
; ORGANISM: homo sapiens
US-10-067-443-23
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Sequence 23, Application US/10649273

Publication No. US20040043407A1

GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
ITILE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE, MP-1

FILE REFERENCE: D0073 CWT
CURRENT APPLICATION NUMBER: US/10/649,273

CURRENT FILING DATE: 2003-08-27

PRIOR APPLICATION NUMBER: US 60/266,518

PRIOR APPLICATION NUMBER: US 10/067,443

PRIOR RILING DATE: 2001-02-05

PRIOR APPLICATION NUMBER: US 60/282,814

PRIOR APPLICATION NUMBER: US 60/282,814

PRIOR APPLICATION NUMBER: US 60/282,814

PRIOR PRICEATION DATE: 2001-04-10

NUMBER OF SEQ ID NOS: 71

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Search completed: November 11, 2005, 03:16:23 Job time : 1401.75 secs

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-Q=/Ggn2_1/USPTO_spool_p/US1643273/runat_02112005_091338_15550/app_query.fasta_1.1429
-DB=Genemb1 -QFWT=fastap -SUPFIX=p2n.rge -MINMATCH=0.1 -L\tilde{LOOPEXT=0}
-UNITS-bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi -LIST=45
-DCCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15 -MODE=LOCAL
-OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=2000000000
-USER=US10649273_eCGN 1 1_7742 @runat 02112005_091338_15550 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG SCORES=0 -WAIT -DSPELOCK=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
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## ALIGNMENTS

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RESULT 1

BC011904

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DEFINITION

Homo sapiens O-sialoglycoprotein endopeptidase-like 1, mRNA (cDNA ACCESSION Clone MGC:20293 IMAGE:4121450), complete cds.

BC011904

VERSION

WCC.

BC011904 2 GI:40225818

KCYWORDS

SOURCE

ORGANISM

Homo sapiens (human)

ORGANISM

Homo sapiens (human)

1 (bases 1 to 1908)

Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G., Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K., Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wagng, J., Hsieh, F., Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L., Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J., Worley, K.C., Hale, S., Garcia, A.M., Gunzatne, P.H., Richards, S., Villaion, D.K., Muzny, D.M., Sodergren, B.J., Lu, X., Gibbs, R.A., Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S., Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y., Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,

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Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
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Akhter,N., Ayele,K., Beckstrom-Sternberg,S.M., Benjamin,B.,
Blakesley,R.W., Bouffard,G.G., Breen,K., Brinkley,C., Brooks,S.,
Blakesley,R.W., Bouffard,G.G., Breen,K., Brinkley,C., Brooks,S.,
Dietrich,N.L., Granite,S., Guan,X., Gupta,J., Haric,P., Legaspi,R.,
Hansen,N., Ho,S.-L., Karlins,E., Kwong,P., Laric,P., Legaspi,R.,
Maduro,Q.L., Masiello,C., Maskeri,B., Mastrian,S.D., McCloskey,J.C.,
McDowell,J., Pearson,R., Stantripop,S., Thomas,P.J., Touchman,J.W.,
Tsurgeon,C., Vogt,J.L., Walker,M.A., Wetherby,K.D., Wiggins,L.,
Young,A., Zhang,L.-H. and Green,E.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tissue Procurement: ATCC
CDNA Library Preparation: Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: National Institutes of Health Intramural
Sequencing Center (NISC),
Gaithersburg, Maryland;
Web site: http://www.nisc.nih.gov/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (30-JUL-2001) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Clone distribution: MGC clone distribution through the I.M.A.G.E. Consortium/ILML at: Series: IRAL Plate: 28 Row: i Column: 22.
Location/Qualifiers
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Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NIH-MGC Project URL: http://mgc.nci.nih.gov
On Dec 19, 2003 this sequence version replaced
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                                                                                                                                                                                                                                    /translation="MLILTKTAGVFFKPSKRKVYBFLRSFNEHPGTLFLHKIVLGIET
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104. .1348
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215. .1111
                                                                                                                                                                      MSGGKA I EHLAKQGNRFHFD I KPPLHHAKNCDFS FTGLQHVTDKI I MKKEKEEG I EKG
QI LSSAAD I AATVQHTMACHL VKRTHRA I LFCKQRDLL PQNNA VLVASGGVASNFY I R
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/note="Peptidase_M22; Region:
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|mol_type="mRNA"
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                                                                                   Glycoprotease family"
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                                                                                                                                                                                              GATAAAATAATAATGAAAAAAGGAAAAAAGAGGAAAGGTATTGAGAAGGGGCAAATCCTGTCT
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                          ACACATCGGGCTATTCTGTTTGTAAGCAGAGAGACTTGTTACCTCAAAATAATGCAGTA
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Percent Similarity:
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                                                                                   GlyIleGluThrSerCysAspAspThrAlaAlaAlaValValAspGluThrGlyAsnVal
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ProAlaAlaGlnGlnLeuHisArgGluAsnIleGlnArgIleValGlnGluAlaLeuSer
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                                          AR428808
Sequence 21
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AR428808.1
Unclassified.
1 (bases 1 to 1387)
Chen,J., Feder,J.N.,
                            Unknown
                                                                                          GlyGluAlaSerIleLysValProGlnLeuLysMetGluIle
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                                                                                                                                                  ACACATCGGGCTATTCTGTTTTGTAAGCAGAGAGACTTGTTACCTCAAAATAATGCAGTA
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REFERENCE AUTHORS TITLE JOURNAL FEATURES

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 CCTCCCTTGCATCATGCTAAAAATTGTGATTTTTCTTTTACTGGACTTCAACACGTTACT 80	7	
GGTGGGAAAGCCATAGAGCATTTGGCCAAACAAGGAAATAGATTTCATTTTGACATCAAA 743	Ø)	
 lytysAlaIleGluHisteuAlatysGlnGlyAs	Qy 221	
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]   ArgardienSerLentleLwsHisDroGlnCvsSerThrMetSer   2	S	
 GlnGlyValSerAspPheLeuLeuGlyLysSerLeuAspIleAlaProGlyAspMet 200 	Qy 181 Db 564	
GTAGAATTTCCTTTTTTAGTTCTTTTGATTTCTGGAGGTCACTGTCTGT	Db 504	
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AlaieuSerieuGlyValGlyieuSerPheSerieuGlnieuValGlyGlnieuLysiys 140 AlaieuSerieuGlyValGlyieuSerPheSerieuGlnieuValGlyGlnieuLysiys 140 AlaieuSerieuGlyValGlyieuSerPheSerieuGlnieuValGlyGlnieuLysiys 140 AlaieuSerieuGlyValGlyieuSerPheSerieuGlnieuGlnieuValGlyGlnieuLysiys 140 AlaieuSerieuGlyValGlyieuSerPheSerieuGlnieuGlnieuValGlyGlnieuLysiys 140 AlaieuSerieuGlyValGlyieuSerPheSerieuGlnieuGlnieuValGlyGlnieuLysiys 140 AlaieuSerieuGlyValGlyieuSerPheSerieuGlnieuGlnieuValGlyGlnieuLysiys 140 AlaieuSerieuGlyValGlyieuSerPheSerieuGlnieuGlnieuValGlyGlnieuLysiys 140 AlaieuSerieuGlyValGlyieuSerieuGlnieuGl	Oy 121	
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GGAATTGAAACTAGTTGTGATGATACAGCAGCTGCTGTGGTGGATGAAACTGGAAATGTG 203	_	
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 GAATTTTTAAGAAGTTTTAATTTTCATCCTGAAACACTATTTCTTCATAAAATAGTATTG 143		
 PheLeuArgSerPheAsnPheHisProGlyThrLeuPheLeuHisLysI	Оу 21	_
 MetLeuIleLeuThrLysThrAlaGlyValPhePheLysProSerLysArgLysValTyr 20	Qy 1 Db 24	
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3.54e-168       Length:       1387         2090.50       Matches:       412         Larity:       93.85%       Conservative:       0         Lmilarity:       93.85%       Mismatches:       2         98.38%       Indels:       25         6       Gaps:       1	Alignment Sco Pred. No.: Score: Percent Simil Best Local Si Query Match: DB:	
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                                                                                                                                                                                                                                                                                                                                                                                         chem, J.M., Fortunato, M. and Barrett, A.J. Cloning and sequencing of a second human sialoglycoprotease homologue Unpublished
                                                                                                                                                                                                                                                                                                              2 (bases 1 to 1387)
Chen, J.M.
Direct Submission
Submitted (27-OCT-2000) Chen J.M., |
Laboratory, The Babraham Institute,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (human)
Homo sapiens
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
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                                                                    LeuAspLysValAlaArgArgLeuSerLeuIleLysHisProGluCysSerThrMetSer
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                                     AspLysIleIleMetLysLysGluLysGluGlyIle-----
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SKVEQINIFGLCIKIAAHFCRYEKGQILSSAADIAATVQHTMAGHLVKRTHRAILFCK
QRDLLFQNNALVASGGVASNFYIRRALEILTMATQCTLLCPFPRLCTDNGIMIAMNG
IERLRGGLGILHDIBGIRYEFKCPLGVDISKEVGEASIKVPQLKMEI"
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
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Full-length cDNAs
Patent: EP 1293569-A 400
Helix Research Institute
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GlyGlyLysAlaIleGluHisLeuAlaLysGlnGlyAsnArgPheHisPheAspIleLys
                                          GlnGlyValSerAspPheLeuLeuLeuGlyLysSerLeuAspIleAlaProGlyAspMet
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Wakamatsu, A., Hayashi, K., Sato, H., Nagai, K., Kimura, K., Makita, H., Sekine, M., Obayashi, K., Sato, H., Nagai, K., Kimura, K., Makita, H., Sekine, M., Obayashi, M., Nishi, T., Shibahara, T., Tanaka, T., Ishihi, S., Yamamoto, J., Saito, K., Kawai, Y., Isono, Y., Nakamura, Y., Nagahari, K., Murakami, K., Yasuda, T., Iwayanagi, T., Wayatsuma, M., Shiratori, A., Sudo, H., Hosoiri, T., Kaku, Y., Kodaira, H., Kondo, H., Shiratori, A., Sudo, H., Hosoiri, T., Kaku, Y., Kodaira, H., Kondo, H., Shiratori, A., Sato, K., Yokoi, T., Furuya, T., Kikkawa, E., Omura, Y., Abe, K., Kamihara, K., Katsuta, N., Sato, K., Kikkawa, E., Omura, Y., Abe, K., Kamihara, K., Katsuta, N., Watanabe, M., Murakawa, K., Fujimori, K., Tanai, H., Kimata, M., Watanabe, M., Murakawa, K., Fujimori, X., Takinata, T., Yamasahi, T., Yamasahi, T., Yamakashi, Fujii, A., Hiraoka, S., Chiba, Y., Ishida, S., Ono, Y., Takiguchi, S., Watanabe, S., Yoshida, M., Hotuta, T., Xusano, J., Kanehori, K., Takahasahi, Fujii, A., Takeuchi, K., Arita, M., Imose, N., Musashino, K., Yuuki, H., Oshima, A., Sasaki, N., Aotsuka, S., Yoshikawa, Y., Matsunawa, H., Ichihara, T., Sasaki, N., Sato, S., Woriya, S., Senoh, A., Mizoguchi, H., Goto, Y., Shimizu, F., Wakebe, H., Hishigaki, H., Watanabe, T., Yumada, A., Takemoto, M., Kawakami, B., Yamazaki, M., Watanabe, K., Kumagai, A., Takura, S., Fukuzumi, Y., Fujimori, Y., Komiyama, M., Takani, S., Tohinara, T., Ohmori, Y., Kawabata, A., Hikiji, T., Kobatake, N., Inagaki, H., Ikema, Y., Okamoto, S., Okitani, R., Kawakami, T., Noguchi, S., Itoh, T., Shigeta, K., Senba, T., Matsumura, K.,
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Homo sapiens cDNA FLJ30879 fis, clone FEBRA2004592, highly similar
to Homo sapiens mRNA for putative sialoglycoprotease type 2.
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3 (bases 1) to 2208)
1 rogai, T., Otsuki, T. and Sugiyama, T.
Direct Submission
Submitsed (24-OCT-2001) Takao Isogai, Helix Research Institute,
Submitted (24-OCT-2001) Takao Isogai, Helix Research Institute,
Genomics Laboratory; 1532-3 Yana, Kisarazu, Chiba 292-0812, Japan
(B.mail:genomics@hri.co.jp, Tel:81-438-52-3975, Fax:81-438-52-3986)
NEDO human cDNA sequencing project supported by Ministry of
Economy, Trade and Industry of Japan; cDNA full insert sequencing:
Research Association for Biotechnology (RAB); cDNA library
construction: Helix Research Institute (HRI) (supported by Japan
Key Technology Center etc.); 5'- & 3'-end one pass sequencing: RAB,
HRI, and Biotechnology Center, National Institute of Technology and
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MetLeuileLeuThrLysThrAlaGlyValPhePheLysProSerLysArgLysValTyr
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vefpflvllisgghctlalvggvsdfllkgksldiafomldkvarrlflikkheecst
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sggkaiehlakognrehfdikptlhhakoudfpfftglqhvydkiimkkeeggikg
QILSSAADIaatvQphtmachlykrthaailfckgrdllpqnnavlvasggvasnfcir
Raleiltnatqctllcepprictdngimia"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="cloning vector: pME18SFL3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 dev_stage="fetus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone="FEBRA2004592"
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/clone_lib="FEBRA2"
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Conservative:
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Indels:
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                                                                                                                                                                                                                                                                                                        ThrHisArgAlaIleLeuPheCysLysGlnArgAspLeuLeuProGlnAsnAsnAlaVal
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                                                                                                                                                                       ThrAsnAlaThrGlnCysThrLeuLeuCysProProProArgLeuCysThrAspAsnGly 360
                                                                                                                                                                                                                                                                                                                                                                                                         SerAlaAlaAspIleAlaAlaThrValGlnHisThrMetAlaCysHisLeuValLysArg
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             IleGluGlyIleArgTyrGluProLysCysProLeuGlyVallAspIleSerLysGluVal
                                                                                                   | IleMetIleAlaTrpAsnGlyIleGluArgLeuArgAlaGlyLeuGlyIleLeuHisAsp
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-TGATGTCCTCTTGGAGTAGACATATCAAAAGAAGTT
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Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,
Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,
Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.I.,
Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
Albramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,
MCKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,
Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,
Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,
Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,
Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,
Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,
Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,
Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E.,
Generation and initial analysis of more than 15,000 full-length
human and mousee cnwa servences
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Contact: nisc mgc@nhgri.nih.gov
Akhter, N., Ayele, K., Beckstrom-Sternberg, S.M., Benjamin, B.,
Blakesley, R.W., Beuffard, G.G., Breen, K., Brinkley, C., Brooks, S.,
Dietrich, N.L., Granite, S., Guan, X., Gupta, J., Haghighi, P.,
Hansen, N., Ho, S.-L., Karlins, B., Kwong, P., Laric, P., Legaspi, R.,
Maduro, Q.L., Masiello, C., Maskeri, B., Mastrian, S.D., McCloskey, J.C.,
McDowell, J., Pearson, R., Stantripop, S., Thomas, P.J., Touchman, J.W.,
Tsurgeon, C., Vogt, J.L., Walker, M.A., Wetherby, K.D., Wiggins, L.,
Young, A., Zhang, L.-H. and Green, B.D.
Clone distribution: MGC clone distribution information can be found through the T.M.A.G.B. Consortium/LLML at: http://imagc.llml.gov
Series: IRAK Plate: 123 Row: d Column: This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 21312463 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.B. Consortium (LLML) DNA Sequencing by: National Institutes of Health Intramural Sequencing Center (NISC),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
Email: cgapbs-remail.nih.gov
Tissue Procurement: Gilbert Smith, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (15-SEP-2003) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             human and mouse cDNA sequences Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903
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Butheria; Rodentia;
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                                                                                                                                       information can be found http://image.llnl.gov
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                                                                                                    AlaSerGlyValSerProSerAspLeuSerAlaIleAlaThrThrIleLysProGlyLeu
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           ProPheIleProIleHisHisMetGluAlaHisAlaLeuThrIleArgLeuThrAsnLys
                                            GCCCTAAGCTTAGGAGTCGGCTTATCCTTTAGCTTACAGCTAGTAAATCGGTTTAAAAAAG
                                                      AlaLeuSerLeuGlyValGlyLeuSerPheSerLeuGlnLeuValGlyGlnLeuLysLys
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CCGTTCATCCCGATTCATCACATGGAGGCTCACGCACTGACTATTAGGCTCACCAATAAA
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333.1397
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="QRI7; Region: Metal-dependent proteases with possible chaperone activity [Posttranslational modification, protein turnover, chaperones]"
/db_xref="CDD:COG0533"
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/protein_id="AAH58172.1" 
/db_xref="GI:34849664"
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/mol_type="mRNA"
/strain="CZECH II"
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/mol_type="genomic
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Nucleic acids and polypeptides
Patent: US 6743619-A 177 01-JUN-2004;
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Tang,Y.T., Zhou,P., Goodrich,R., Liu,C.,
Zhang,J., Zhao,Q.A., Yang,Y., Xue,A.J.,
Wang,D. and Drmanac,R.T.
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                                                                                               LeuProGlnAsnAsnAlaValLeuValAlaSerGlyGlyValAlaSerAsnPheTyrIle
GlyLeuGlyIleLeuHisAspIleGluGlyIleArgTyrGluProLysCysProLeuGly
                   ArgLeuCysThrAspAsnGlyIleMetIleAlaTrpAsnGlyIleGluArgLeuArgAla
                                                        AlaCysHisLeuValLysArgThrHisArgAlaIleLeuPheCysLysGlnArgAspLeu
                                                                                                                                                                           GluLysGlyGlnIleLeuSerSerAlaAlaAspIleAlaAlaThrValGlnHisThrMet
                                                                                                                                                                                                                                                     HisCysLeuLeuAlaLeuValGlnGlyValSerAspPheLeuLeuLeuGlyLysSerLeu 193
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                                                                                                                                     GCATGTCATCTTGTGAAAAAGAACACATCGGGCTATTCTGTTTTTGTAAGCAGAGACTTG
                                                                                                                                                                                                                 ACTGGACTTCAACACGTTACTGATAAAATAATAATGAAAAAGGAAAAAGGGAAGGTATT
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Clone distribution: MGC clone distribution information can through the I.M.A.G.B. Consortium/LLML at: http://image.lln Series: TRAK Plate: 182 Pow: f Column: 6
This clone was selected for full length sequencing because passed the following selection criteria: Hexamer frequency analysis, Similarity but not identity to protein.

Location/Qualifiers
                                                                                                                                                                                                                              cDNA Library Preparation: Express Genomics CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLML) DNA Sequencing by: Sequencing Group at the Stanford Human Center, Stanford University School of Medicine, Stanford, Web site: http://www-shgc.stanford.edu Contact: (Dickson, Mark) mcd@paxil.stanford edu Dickson, M., Schmutz, J., Grimwood, J., Rodriquez, A., and
                                                                                                                                                                                                         Dickson, M.,
R. M.
                                                                                                                                                                                                                                                                                                                                                                                                           Email: cgapbs-remail.nih.gov
Tissue Procurement: Howard Ja
                                                                                                                                                                                                                                                                                                                                                                                                                                                            NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (02-AUG-2004) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Director MGC Project.
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Eukaryota; Metazoa;
Mammalia; Eutheria;
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GlnGlyValSerAspPheLeuLeuLeuGlyLysSerLeuAspIleAlaProGlyAspMet
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AR428809
                                                                                                                                                                                                                                             1 (bases 1 to 1526)
Chen, J. Feder, J. N., Nelson, T. C., Krystek, S.R. and Duclos, P.
Polynucleotides encoding a novel metalloprotease, MP-1
Patent: US 6642041-A 23 04-NOV-2003;
                                                                                                                                                                                                                                                                                                                            Unknown
                                                                                                                                                                                                                                                                                                                                               Unknown
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                                                                                                                                                                                                                                                                                                             Unclassified.
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MetGluAlaHisAlaLeuThrIleArgLeuThrAsnLysValGluPheProPheLeuVal 167

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RESULT 13
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LOCUS
DEFINITION
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KEYWORDS
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AUTHORS
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Archosauria, Aves, Neognathae; Galliformes; Phasianidae; Phasianinae; Gallus.

1 (bases 1 to 1522)

Boardman, P.E., Bonfield, J.K., Brown, W.R.A., Carder, C., Chalk, S.E., Croning, M.D. R., Davies, R.M., Francis, M.D., Grafham, D.V., Hubbard, S.J., Humphray, S.J., Hunt, P.J., Maddison, M., McLaren, S.R., Niblett, D., Overton, I.M., Rogers, J., Scott, C.E., Taylor, R.G., Tickle, C. and Wilson, S.A.
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Gallus gallus
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Gallus gallus finished cDNA,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This sequence is from the BBSRC/Dundee/Nottingham/Sanger/Sheffield/UMIST cDNA collection, from a library constructed by Elizabeth Bosch. cDNA was prepared from RNA extracted from muscle, normalised, and poly A-trimmed. EcoRI-NotI cut cDNA was then ligated into the vector. Vector: pBluescript II KS(+); Site_1: EcoRI; Site_2: NotI Host: Escherichia coli DH10B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Direct Submission
Submitted (02-FEB-2004) Sanger Institute, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquiries: chickest@bms.umist.ac.uk
BBSRC/Dundee/Nottingham/Sanger/Sheffield/UMIST Gallus gallus cDNA
                 CACGGCATGGCTGGGGGAAGGCAATAGAGCACCTGGCTCAAACCGGAGACTGGCCAACAG
                               SerThrMetSerGlyGlyLysAlaIleGluHisLeuAlaLysGlnGlyAsnArgPheHis
                                                                       ProglyaspMetLeuAspLysValAlaArgArgLeuSerLeuIleLysHisProgluCys
                                                                                                                            CTGACAGAGCAAGTAGAATTTCCCTTCTTAGTTCTTTTACTCTCCGGAGGTCACTGCATC
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                                                                                                                                                                                                                                            AGGTACCAGAAGCCTTTCATACCCATTCATCACATGGAGGCTCACGCACTTACCATCAGA
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                                                                                                         Strauberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,

Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,

Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,

Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,

Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,

Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,

Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,

Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,

Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,

McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,

Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,

Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,

Villalon, D.K., Muzny, D.M., Madan, A., Young, A.C., Shevchenko, Y.,

Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,

Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,

Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E.,

Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A.

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BC038910
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
1 (bases 1 to 1017)
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Direct Submission

Submitted (25-OCT-2002) National Institutes of Health, Mammalian Submitted (25-OCT-2002) Cancer Genomics Office, National Cancer Gene Collection (MGC), Cancer Genomics Office, MD 20892-2590, Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
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Contact: MGC help desk
Email: cgapbs-remail.nih.gov
Tissue Procurement: Jeffrey E. Green, M.D.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium
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     LysProProLeuHisHisAlaLysAsnCysAspPheSerPheThrGlyLeuGlnHisVal
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/clone lib="NCI_CGAP_Li9"
/lab_host="DH10B"
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/db_xref="taxon:10090"
/clone="IMAGE:5053559"
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                                                                                                                                            sequencing project.
This sequence is from the
BBSRC/Dundee/Nottingham/Sanger/Sheffield/UMIST cDNA collection,
BBSRC/Dundee/Nottingham/Sanger/Sheffield/UMIST cDNA was prepared
from a library constructed by Elizabeth Bosch. cDNA was prepared
from RNA extracted from limbs,
and poly A-trimmed. EcoRI-NotI cut cDNA was then ligated into the
vector. Vector: pBluescript II KS(+); Site_1: EcoRI; Site_2: NotI
Host: Escherichia coli DH10B.
                                                                                                                                                                                                                                                                                Boardman, P.E., Bonfield, J.K., Brown, W.R.A., Carder, C., Chalk, S.E., Croning, M.D.R., Davies, R.M., Francis, M.D., Grafham, D.V., Hubbard, S.J., Humphray, S.J., Hunt, P.J., Maddison, M., McLaren, S.R., Niblett, D., Overton, I.M., Rogers, J., Scott, C.E., Taylor, R.G., Tickle, C. and Wilson, S.A. Direct Submission Submitted (29-MAR-2004) Sanger Institute, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquiries: chickest@bms.umist.ac.uk On Apr 1, 2004 this sequence version replaced gi:41631491.

BBSRC/Dundee/Nottingham/Sanger/Sheffield/UMIST Gallus gallus cDNA
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae;
Phasianinae; Gallus.
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Boardman, P.E., Bonfield, J.K.,
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             /organism="Gallus gallus"
/mol type="mRNA"
/strain="White Leghorn, His
/db xret="taxon:9011"
/clone="ChEST62n16"
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                                                                                                                                  ocation/Qualifiers
'dev_stage="stage 36"
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GlyLeuGlyIleLeuHisAspIleGluGlyIleArgTyrGluProLysCysProLeuGly 393
                                LeuProGlnAsnAsnAlaValLeuValAlaSerGlyGlyValAlaSerAsnPheTyrIle 333
                                                                                                                                                                                                                                   GCTGCTCATATTATCCAGCGGACACACCGAGCCATGCTCTTCTGCATGAAAAACAGCATA 1205
                                                                                                                                                                                                                                                           AlaCysHisLeuValLysArgThrHisArgAlaIleLeuPheCysLysGlnArgAspLeu 313
                                                                                                                                                                                                                                                                                                     CAAGAAGGGGAAATCCTGTCCTGCGTTAAGGACATCGCTGCTGCTGCACAGCATGTAGTG
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                                                                                                                                                                                                                                                                                                                                                                    ThrGlyLeuGlnHisValThrAspLysIleIleMetLysLysGluLysGluLysGluGlyIle 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ArgPheHisPheAspIleLysProProLeuHisHisAlaLysAsnCysAspPheSerPhe
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IleValGlnGluAlaLeuSerAlaSerGlyValSerProSerAspLeuSerAlaIleAla 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGAGCAGGTGGAATAATTCCTCATGTAGCACAGCAGCTTCACAGAGAAAAGCATCCAGCAA
                                                                                                 AGAAAAGGA CT GCAGA CT CT GGCAAAT GCAAA CGGTTTT GCTTTT CT GT CT CCT CCT CCA
                                                                                                                                ArgArgAlaLeuGluIleLeuThrAsnAlaThrGlnCysThrLeuLeuCysProProPro 353
                                                                                                                                                                    TTATTACCAAAAACTGCAACTCTGGTTGTATCAGGAGGAGTTGCAAGTAATCAGTATATC
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Maximum |
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-Q=/cgn2 1/USPTO_spool_p/US10649273/runat_02112005_091337_15540/app_query.fasta_1.1429
-Q=/cgn2 1/USPTO_spool_p/US10649273/runat_02112005_091337_15540/app_query.fasta_1.1429
-DB=N_Geneseq_16Dec04 -QFMT=fastap -SUPFIX=p2n.rng -MINMATCH=0.1 -LOOPCL=0
-LOOPEXT=0 -UNITS=bbits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi
-LIST=45 -DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15
-MODES-LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000
-USER=US10649273_GCGN_1_1_1063_grunat_07112005_091337_15540 -NCPU=6 -ICPU=3
-NO_MMAD -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
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19-APR-2000; 2000CN-00106834. 19-APR-2000; 2000CN-00106834

(SHAN-) SHANGHAI SHENGYUAN GENE DEV CO LTD

24-OCT-2001. CN1318550-A.

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RESULT 1
ABA93268
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                                                                        Homo sapiens.
                                                                                                                              Human O-sialoglycoproteinase-like protein encoding cDNA SEQ ID NO:1.
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Aca42146 Prokaryot
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              O-sialogycoproteinase-like protein and encoding for diagnosing, preventing and treating related
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cc amyotrophic lateral sclerosis (ALS), its juvenile form or an ALS-like condition. The compositions and methods are also useful for diagnosing, prognosticating, treating, ameliorating and/or treating disorders cassociated with MP-1 activity, e.g. diabetes, cancer, reproductive disorders (e.g. Kleinfelter's syndrome, genital warts, or germinal cell aplasia), metabolic disorders (e.g. premature puberty, Kallman syndrome, or Cushing's syndrome), neurodegenerative diseases (Alzheimer's disease, Parkinson's disease, Huntington's disease or Tourette syndrome), liver and renal diseases and immune disorders (e.g. AlDS, rheumatoid arthritis or sepsis), pulmonary diseases (e.g. pneumonia, emphysema or cystic fibrosis) and vascular, inflammatory and neurological disorders (e.g. Alzheimer's disease or Parkinson's disease). This sequence represents a metalloprotease MP1 polynucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention describes an isolated nucleic acid molecule (I) encoding metalloprotease (MP-1). (I) is useful for preventing, treating, or ameliorating a medical condition, particularly an immune disorder, an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 2197
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                                                                     AlaSerGlyValSerProSerAspLeuSerAlaIleAlaThrThrIleLysProGlyLeu
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                                                                                                                                        The invention relates to an isolated polypeptide comprising: any of 28 cc sequences of 48-1256 amino acids; a natural amino acid sequence at least CC 90% identical to the 28 amino acids sequences, 94% identical to a sequence of 703 or 267 amino acids, 96% identical to a sequence of 414 amino acids, or 97% identical to a sequence of 424 amino acids, all given in CC the specification; or a biologically active or immunogenic fragment of CC the isolated polypeptide. The polypeptides and polymucleotides are useful CC with the decreased expression of protein modification and maintenance CC molecules (PMOD), such as cell proliferative diseases (e.g. cancer, CC allergies), neurological disorders (e.g. stroke, Parkinson's disease, CC epilepsy), gastrointestinal (e.g. ulcer, cirrhosis), reproductive (e.g. cancertinfections (e.g. bacterial, viral, parasitic, protozoal). These are also CC useful in assessing the effects of exogenous compounds on the expression of nucleic acid and amino acid sequences of PMOD. The PMOD or its crangents are useful in screening compounds for effectiveness as agonist or anagonist of the polypeptide. The microarray is useful in monitoring CC or measuring protein-protein interactions, drug-target interactions, and CC gene expression profiles. This polynucleotide sequence represents the DNA encoding a human PMOD protein of the invention
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Thangavelu K, Gietz-
Thangavelu K, Mason PM, (1998)
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DB; ABJ26654.
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2001US-0315992P.
2002US-0378205P.
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P-PSDB;
The present invention relates to novel 38650, 28472, 5495, 65507, 81588 or 14354 nucleic acid molecules which encode adenosine deaminase, glycoprotease or seven transmembrane domain (77m) receptor family members. Sequences of the invention are useful in diagnosing and treating cancer or aberrant cellular proliferation and/or differentiation (e.g. colon or lung cancer), immune disorders (e.g. selective IgA deficiency, rheumatoi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; adenosine deaminase; seven transmembrane domain receptor; cancer; 7TM; glycoprotease; immune disorder; IgA deficiency; allergy; arrhythmia; rheumatoid arthritis; diabetes; atherosclerosis; cardiovascular disorder; hypertension; ischaemic heart disease; obesity; myocardial infarction; endothelial cell disorder; Grave's disease; psoriasis; brain disorder; Parkinson's disease; Alzheimer's disease; haematopoietic disorder; cerebral oedema; metabolic disorder; liver disorder; platelet disorder; chromosome mapping; tissue typing; gene therapy; neuroprotective; cytostatic; anorectic; cardiant; haemostatic; gene; ss.
                                                                                                                                               New 38650, 28472, 5495, 65507, 81588 or 14354 nucleic acid molecules, useful for diagnosing and treating cancer, immune, cardiovascular, hematopoietic, brain, pain, metabolic, liver or platelet disorders, a
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(LEIB/)
(KAPE/)
                                                                        08-NOV-2000; 2000US-0246768P
08-NOV-2000; 2000US-0246772P
15-NOV-2000; 2000US-0249185P
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KAPELLER-LIBERMANN
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/note= "This CDS is speci
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DB; ABU09569.
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                                                               Glucksmann
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New isolated 38650, 28472, 5495, 65507, 81588 and 14354 nucleic acid molecules, useful for diagnosing, treating cancer, pain, or immune, heart, endothelial cell, hematopoeitic, blood vessel, brain, metabolic

Claim 2; Fig 8; 90pp; English

The invention relates to an isolated 38650 (encoding adenosine CC deaminase), 28472 (encoding a glycoprotease), 5495 (encoding a 7 CC deaminase), 28472 (encoding a glycoprotease), 5495 (encoding a 7 CC transmembrane receptor), 65507, 81588 or 14354 nucleic acid molecule (or cc transmembrane receptor), 65507, 81588 or 14354 nucleic acids or transmembrane which is at least 60% identical to the six nucleic acids or their open reading frames, fragments of at least 15 nucleotides, containing variants, or a DNA insert of the plasmid deposited CC with the American Type Culture Collection as Accession No. not defined in the specification, which encodes the amino acid sequence). Also included are a host cell containing the nucleic acids (used to produce the protections), the encoded proteins, an antibody that selectively binds to the polypeptide, and identifying a compound that binds to/modulates the activity of the polypeptide. The nucleic acid molecules, polypeptides and methods are useful for disgnosing, treating cancer, aberrant cellular proliferation and/or differentiation, immune disorders, heart disorders, cardiovascular disorders including endothelial cell disorders, pain and the tabolic disorders, blood vessel disorders, brain disorders, pain can detabolic disorders, liver disorders and platelet disorders (many examples of these disorders are given in the specification). The present constant cell of the tabolic disorders are given in the specification. and

Sequence 1820 B₽; 543 A; 365 C; 393 G; 518 7; 0 U; 1 Other;

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Percent Similarity:
Best Local Similarit
Query Match:
                    Similarity:
          1.24e-208
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99.03%
98.31%
98.26%
Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
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US-10-649-273-2 (1-414) x ACA60887 (1-1820)

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RESULT 6
ABS57002
ID ABS58
XX ABS58
AC ABS5
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CT 30-J
breast cancer; ovarian cancer; prostate cancer; colon cancer; lung Cancer; immune disorder; heart disorder; cardiovascular disorder endothelial disorder; henatopoietic disorder; blood vessel disorder; brain disorder; pain; metabolic disorder; liver disorder; diabetes; platelet disorder; carcinoma; sarcoma; leukaemia; Hodgkin's disease;
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New adenosine deaminase, glycoprotease and nucleic acids and polypeptides, designated 81588 and 14354, useful for treating e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            autoimmune disorder; hypertension; atherosclerosis; heart failure myocardial infarction; ischaemic heart disease; Crohn's disease; Grave's disease; Kawasaki syndrome; Raynaud's disease; aneurysm; cerebral ischaemia; peripheral neuropathy; Alzheimer's disease; parkinson's disease; anorexia nervosa; cachexia; glycoprotease;
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08-NOV-2000; 2000US-0246772P
15-NOV-2000; 2000US-0249185P
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/product= "Glycoprotease 28472"
/note= "Specifically claimed in
                                                                                                                                                                                                                                                                                                                                                                                                                                                           *tag=
                                                                                                                                                                                                                                                                                                             Glucksmann
                                                                                                                                                                                                                                             e.g. leukemias, Hodgkin's
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s disease
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Claim 2; Fig 8A-B; 178pp; English

CC The invention describes isolated 38650, 28472, 5495, 65507, 81588 and CC 14354 nucleic acid molecules (I) and their encoded polypeptides (II). The CR 38650 nucleic acid molecule comprises a sequence encoding adenosine CC deaminase. The 28472 nucleic acid molecule comprises a sequence encoding CC a human glycoprotease. The 5495, 65507, 81588 and 14354 comprise CC sequences that encode a human seven transmembrane domain (7TM). The CR 38550, 28472, 5495, 65507, 81588 or 14354 nucleic acid and polypeptide cC sequences are useful for diagnosing, preventing or treating a subject CC with or at risk of developing a disorder, e.g. cancer or aberrant CC cellular proliferation and/or differentiation (e.g. breast, ovarian, CC prostate, colon or lung cancer), immune disorders, heart disorders, cardiovascular disorders, endothelial disorders, heart disorders, brain disorders, pain and metabolic disorders, CC liver disorders or platelet disorders, pain and metabolic disorders, CC liver disorders or platelet disorders, autoimune disorders include carcinoma, sarcoma, leukaemia, Hodgkin's disease, autoimune disorders (spheratome, Raynaud's disease, Crohn's disease, autoimune disorders, CC ischaemia, peripheral concernosa, Alzheimer's disease, aneurysm, cerebral ischaemia, peripheral concernosa, autoimune disorders, anorexia nervosa, CC cachexia or diabetes. This sequence encodes the novel human glycoprotease

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Sequence 1821 ₿P; 543 P 365 Ç 394 ଦ 518 Ţ, 0 Ç, 1 Other;

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Conservative:
Mismatches:
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US-10-649-273-2 (1-414) x ABS57020 (1-1821)

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| IleMet||leAlaTrpAsnGly||leGluArgLeuArgAlaGlyLeuGly||leLeuHisAsp
                                                                                                             LeuValAlaSerGlyGlyValAlaSerAsnPheTyrIleArgArgAlaLeuGluIleLeu
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                                                      ThrAsnAlaThrGlnCysThrLeuLeuCysProProProArgLeuCysThrAspAsnGly
                                                                                               CTGGTTGCATCTGGTGGTCGCAAGTAACTTCTATATCCGCAGAGCTCTGGAAATTTTA
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Best Local Similarity:
US-10-649-273-2 (1-414) x ADA52832
                                                                                                                                                                                                                                                                                             Isogai T,
Yamamoto ;
Seki N, 1
                                                                                                                            The present invention relates to novel human secretory or membrane proteins (ADA54072-ADA55710) and their coding sequences (ADA52433-ADA54071). The coding sequences are useful in the gene therapy of diseases caused by abnormalities of the proteins, e.g. cancer, inflammatory diseases, osteoporosis or neurological disease.
                                                                                                                                                                                                                  New polynucleotides encoding full-length polypeptides, e.g. secretory and/or membrane proteins, useful for developing medicines for diseases which the gene is involved, or as target molecules for gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cytostatic; Anti-inflammatory; Osteopathic; Neuroprotective; Nootropic; Gene Therapy; human; secretory protein; membrane proteins; cancer; inflammatory disease; osteoporosis; neurological disease; gene; ss.
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P-PSDB; ADA54471.
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Hio Y, Otsuka K, Nagai K, Irie
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IleGluGlyIleArgTyrGluProLysCysProLeuGlyValAspIleSerLysGluVal
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The invention relates to a novel method for detecting soft tissue sarcoma which comprises obtaining a first soft tissue sample from an individual and a normal soft tissue sample from the same or different individual, determining the expression of a gene in both samples and comparing the expression of the gene in both soft tissue samples and comparing the expression in the first soft tissue sample indicates the presence of soft tissue sarcoma. The method of the invention has cytostatic applications and may be useful for detecting soft tissue sarcoma, possibly via gene therapy or vaccine production. The nucleic acid sequences may be useful in diagnostic and screening applications. The current sequence is that of a human soft tissue sarcoma-upregulated DNA of the invention. The current sequence is not shown within the specification per se but was submitted in CD format by the inventor.

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Sequence 2890 BP; 869 A; 609 ü 611 G; 789 7 0 Ç 12 Other

Query Serry ð Percent Similarity: Best Local Similarity: US-10-649-273-2 (1-414) x ADQ24627 Match: No.: MetLeuIleLeuThrLysThrAlaGlyValPhePheLysProSerLysArgLysValTyr 3.2e-193 1944.00 93.24% 93.24% 91.48% (1-2890)Length:
Matches:
Conservative:
Mismatches:
Indels: 2890 386 0 4 24

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Huntington's disease; amyotrophic lateral sclerosis; haemophilia;
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29-JAN-2002; 2002WO-US001222

30-JAN-2001; 2001US-00774528

GOODRICH F Ø Ξ

Tang TY, Xue AJ, Liu C, Yang Y, Zhou P, Wehrman Η, Asundi V, T, Wang J, Zhang Wang Ď,ď Zhao QA, Drmanac I RT; Ren

WPI; 2003-058563/05.

Novel polypeptide useful for treating neurodegenerative diseases, myeloid or lymphoid cell disorders, bone disorders, mechanical and traumatic disorders, coagulation disorders, and inflammatory diseases.

Claim 1; Page; 612pp; English

This invention relates to the cDNA sequences encoding an isolated novel CC human polypeptide. The protein encoded by the nucleic acid of the CC invention is useful for treating central and peripheral nervous system CC diseases (e.g. peripheral neuropathy, Huntington's disease, amyotrophic CC lateral sclerosis); neurodegenerative diseases (e.g. Parkinson's disease, CC Alzheimer's disease); autoimmune disease (e.g. systemic lupus CC erythematosus, rheumatoid arthritis, insulin-dependent diabetes mellitus) (e.g. wounds, ulcers, burns; bone disorders (e.g. anaemia and thrombocytopaenia); myeloid or lymphoid cell disorders (e.g. anaemia and thrombocytopaenia); costeoarthritis); mechanical and traumatic disorders (e.g. stroke, head CC esteoarthritis); mechanical and traumatic disorders (e.g. stroke, head CC esteoarthritis); mechanical and traumatic disorders (e.g. stroke, head CC esteoarthritis, asthma; coagulation disorders (e.g. haemophilia); CC cancer and tumours; and inflammatory diseases (e.g. haemophilia); CC cancer and tumours; and inflammatory diseases (e.g. haemophilia); confection or function of infectious agents such as bacteria, fungi, crimases, or to effect bodily characteristics, biorhythms or circadian cyrluses, or to effect bodily characteristics, biorhythms or circadian cycles of rhythms. The protein may also have proliferation/differentiation, stem cell growth factor, haematopoiesis regulation, immune stimulating or suppressing, chemotactic/chemokinetic,

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The present invention describes a non-human transgenic animal (I) Comprising a disruption in a protease target gene (PG) selected from CC calcium activated neutral protease type 5 (CAPNS) gene, tryptase 4 gene CC and sialoglycoprotease-like gene. Also described is a targeting construct (CII), comprising a first polynucleotide sequence homologous to at least a first portion of PG, a second polynucleotide sequence homologous to at least a producing a transgenic mouse comprising a disruption in a protease target CC gene, by introducing (II) into a cell; introducing the cell into a generation of PG and a selectable marker. (II) is useful for CC mouse, where the pseudopregnant mouse gives birth to a pseudopregnant mouse, where the pseudopregnant mouse gives birth to a chimeric mouse, and breeding the chimeric mouse to produce the transgenic mouse. (I) is useful for identifying an agent that modulates the expression or function of the disrupted protease target gene in (I) is modulated. (I) is also useful for testing the cefficacy of proposed genetic and pharmacological therapies for human
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06-DEC-2000; 2000US-0251820P
13-DEC-2000; 2000US-0255971P
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Novel transgenic animal, comprising a disruption in protease target gene, is useful for identifying agents that ameliorates a phenotype associated
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New isolated nucleic acid encoding treating, or ameliorating diseases metalloproteinase activity, e.g. im neurological disorders.

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MP-1 protein, useful for preventing, associated with aberrant mmune, metabolic, inflammatory and

Disclosure;

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US-10-649-273-2 (1-414) x ABS76639
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Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     aberrant glutamate transport or motor neuron disorder, such as amyotrophic lateral sclerosis (ALS), its juvenile form or an ALS-like condition. The compositions and methods are also useful for diagnosing, prognosticating, treating, ameliorating and/or treating disorders associated with MP-1 activity, e.g. diabetes, cancer, reproductive disorders (e.g. Kleinfelter's syndrome, genital warts, or germinal cell aplasia), metabolic disorders (e.g. premature puberty, Kallman syndrome, or Cushing's syndrome), neurodegenerative diseases (Alzheimer's disease, Parkinson's disease, Huntington's disease or Tourette syndrome), liver and renal diseases and immune disorders (e.g. AIDS, rheumatoid arthritis or sepsis), pulmonary diseases (e.g. pneumonia, emphysema or cystic fibrosis) and vascular, inflammatory and neurological disorders (e.g. Alzheimer's disease or Parkinson's disease). This sequence represents a metalloprotease MPI polynucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
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Peralta CH, L
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17-JAN-2002; 2002US-0349413P
17-JAN-2002; 2002US-0349946P
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JY, Tuason O, Yap
CH, Lewis SA,
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ason O, Yap PE, Amshey SR, Dam
, Lewis SA, Chen A, Marwaha R,
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am TC, Liu TF, Gerstin
R, Lan RY, Urashka ME;
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New human diagnostic and therapeutic polynucleotides and polypeptides, useful for diagnosing, treating or preventing e.g. leukemia, brain cancer, atherosclerosis, AIDS, thyroiditis, infections, obesity, stroke

Claim 1; SEQ ID NO 100; 634pp; English.

therapeutic polynucleotide (designated human diagnostic and therapeutic polynucleotide (designated dithp). The novel dithp polynucleotide comprises: any of 188 DNA sequences consisting of 195-779 base pairs fully defined in the specification; a polynucleotide comprising a naturally occurring polynucleotide sequence at least 90% identical to the dithp polynucleotide; a polynucleotide complementary to the dithp polynucleotide or its polynucleotide which is at least 90% identical; or an RNA equivalent of any of the polynucleotides mentioned above. The dithp polynucleotides have the following activities: antiarteriosclerotic, antiinflammatory, cerebroprotective, antilipaemic, antidiabetic, immunosuppressive, neuroprotective, nootropic, neuroleptic, tranquilizer, osteopathic, antiarthritic, antirheumatic. Cytostario

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Db 2649 AGAACGTGCTTCGTAAACTAACATACTGCAAAAAAGGTAAAATAAGAGAATATATAT	Оу 200 200	Db 2709 CATAAAGGCTGAAATAGTTTGCAGATACAGTTATGTATTTTGCCAAATAATGTATGT	N	Qy 200 200	Db 2829 TTTTATCTTAGTAAACTGAACACAAAATTCACATATGGTGAGAAAAAAAA	200	QY 200 200  Db 2889 TGTCCATTTCAACTAAGTAGCAATAGATGTGCTACCACCATTCACCTAAATATTTCTGAA 2830	Qy 197 ProGlyAspMet 200	3008	177 LeuAlaLeuValGlnGlyValSerAspPheLeuLeuLeuGlyLysSerLeuAspIleAla	Qy 157 LeuThrAsnLysValGluPheProPheLeuValLeuLeuIleSerGlyGlyHisCysLeu 176 	_	3.39e-94 Length: 1001.50 Matches: ty: 44.82% Conservative: arity: 44.64% Mismatches:	SQ Sequence 3358 BP; 1105 A; 577 C; 601 G; 1075 T; 0 U; 0 Other;	CC of the invention.	CC polynucleotide sequence represents one of the human dithp DNA sequences	CC HUNCINGTON'S GLISERSE, MAINAINON'S GLISERSE, CLEUCALEAGUE GLISERSE, CC anxiety, Schizophrenia), gastrointestinal disorders (e.g. ulcers), CC transport disorders (e.g. akinesia or multidrug resistance), or	CC hyperlipidaemia, obesity), neurological disorders (e.g. ischaemic CC cerebrovascular disease, stroke, Alzheimer's disease, Pick's disease,	CC (e.g. Cusning's syndrome or epilepsy, endoctine disorders (e.g. Cc thrombosis, hypopituitarism, hypogonadism, gidgantism, goiter) metabolic CC disorders (e.g. hyporcholesterolaemia, hypoglycaemia, diabetes,	CC arthritis, scieroderma, systemic tubus exychemicusus, intections (e.g. CC viral, bacterial, fungal or parasition infection), developmental disorders (e.g. continuous) and continuous disorders (e.g. continuous) and continuous disorders (e.g. continuous).	CC Addison's disease, thyroiditis, crom's disease, Graves disease, CC Hashimoto's thyroiditis, multiple sclerosis, osteoarthritis, rheumatoid	CC atherosclerosis, cirrhosis, hepatitis, polycythemia vera, primary CC thrombocytopenia), autoimmune/inflammatory disorders (e.g. AIDS,	CC cancer, breast cancer, cervix cancer, bone cancer, liver cancer, lung CC cancer) or other cell proliferative disorders (e.g. arteriosclerosis,	CC associated with the expression of human molecules. In particular, these CC diseases include cancers (e.g. adenocarcinoma, leukaemia, melanoma, brain	protein replacement therapy. To polypeptides are useful for di		
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                                                                                                                                                                                                                                                                                                        capable of detecting 1000 or more genes from Drosophila. The invention useful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher eukaryotes for the development of insectifieds, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA sequences (ABL01840-ABL16175) and the encoded proteins (ABB5737-ABB72072). The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                        No.:
                                                                                                                                                                                                                                                                                 Sequence 1601 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention relates to an isolated nucleic acid detection reagent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 1; SEQ ID NO 25372; 21pp + Sequence Listing; English.
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                                                                                                                                                                                                                     ArgLeuCysThrAspAsnGlyIleMetIleAlaTrpAsnGlyIleGluArgLeuArgAla
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CC (a) an oligo-dT primer and an oligonucleotide complementary to the CC complementary strand of a polynucleotide which comprises one of the 5602 nucleotide sequences defined in the specification, where the CC complementary strand of a polynucleotide which comprises a 5'-end CC complementary strand of a polynucleotide which comprises a 5'-end CC complementary strand of a polynucleotide which comprises a 5'-end CC polynucleotide which comprises a 3'-end sequence complementary to a CC polynucleotide comprises a 3'-end sequence, where the CC oligonucleotide comprises a 3'-end sequence, where the CC end sequence's end sequence is selected from those defined in the specification. The primers are useful for synthesising polynucleotides, CC gene therapy. The primers are useful for synthesising polynucleotides, CC detection and/or diagnosis of the abnormality of the proteins encoded by the full-length cDNAs. The primers are also useful for the CC detection and/or diagnosis of the abnormality of the proteins encoded by the full-length cDNAs. The primers are also useful for the CC particularly without any specialised methods. AAH3166 to AAH3628 and CC AAH3633 to AAH3142 represent human cDNA sequences; AAB92446 to AAB95893 represent human amino acid sequences; and AAH3629 to AAH3622 represent CC present invention
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                                                                                                                                               The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention useful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABL1616-ABL30511), expressed DNA sequences (ABL1640-ABL16175) and the encoded proteins (ABB57737-ABB72072). The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
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CTGCTCCGACAACGCCTCATGATCGCCTGGCACGCGTTGAGCAACTG--
              uCysThrAspAsnGlyIleMetIleAlaTrpAsnGlyIleGluArgLeuArgAlaGlyLe
                                                      CAACATCGAACATCTGGCCGCGCAGTATGGCTGCAGGAGCTTCCCGTCCATCGAAGCGGTA
                                                                                gAlaLeuGluIleLeuThrAsnAlaThrGlnCysThrLeuLeuCysProProProArgLe
                                                                                                          OGlnAsnAsnAlaValLeuValAlaSerGlyGlyValAlaSerAsnPheTyrIleArgAr 335
TGACACCCCGCCCACACTGGTCATGTCCGGCGGTGTGGCCAACAACGATGCCATATACGC 1619
                                                                                                                                                                 uValLysArgThrHisArgAlaIleLeuPheCys-----LysGlnArgAspLeuLeuPr
                                                                                                                                                                                                                        AGTCATCAGCAACTACGGCGACTTCTGCGCCGGCCTGCTCTCTGCAGCCGGCACCT
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                                                                                                                                                                                                                                                                                                                                   eAspIleLysProProLeuHisHisAlaLysAsnCysAspPheSerPheThrGlyLeuGl 257
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-Q=/cgn2_1/USPTO_spool_p/US10649273/runat_02112005_091338_15562/app_query.fasta_1.1429
-Q=/cgn2_1/USPTO_spool_p/US10649273/runat_02112005_091338_15562/app_query.fasta_1.1429
-DB=EST -QFMT=fastap -SUFFIX=p2n.rst -MINMATCH=0.1 -LOOPCL=0 -LOOPEXT=0
-UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi -LIST=45
-DCCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15 -MODE=LOCAL
-OUTFMT=pto -NORM=EXT -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000
-USER=US10649273_GCGN _1 1_8076_prunat_02112005_091338_15562 -NCPU=6 -ICPU=3
-NO_MMAD -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LOOGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
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## ALIGNMENTS

JOURNAL MEDLINE PUBMED REFERENCE AUTHORS REFERENCE AUTHORS TITLE REFERENCE AUTHORS KEYWORDS SOURCE ORGANISM RESULT 1 AK045669 LOCUS ACCESSION VERSION DEFINITION JOURNAL MEDLINE PUBMED TITLE Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y. Normalization and subtraction of cap-trapper selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new Senome Res. 10 (10), 1617-1630 (2000) Shibata,K., Itoh,M., Aizawa,K., Nagaoka,S., Sasaki,N., Carninci,P. Konno,H., Akiyama,J., Nishi,K., Kitsunai,T., Tashiro,H., Itoh,M., Suni,N., Ishii,Y., Nakamura,S., Hazama,M., Nishine,T., Harada,A., Yamamoto,R., Matsumoto,H., Sakaguchi,S., Ikegami,T., Kashiwagi,K. AKO45669 2284 bp mRNA linear HTC 03-APR-200 Mus musculus adult male corpora quadrigemina cDNA, RIKEN full-length enriched library, clone:B330219017 product:similar to PUTATIVE SIALOGLYCOPROTEASE TYPE 2 [Homo sapiens], full insert Carninci,P. and Hayashizaki,Y.
High-efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999) Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus Mus musculus (house mouse) sequence. AK045669 AK045669.1 GI:26337528 HTC; CAP trapper. 11042159 10349636 HTC 03-APR-2004 Murinae; Mus Carninci, P., of new genes

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S Adachi, J., Aizawa, K., Akimura, T., Hara, A., Hashizume, W., Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashizume, W., Fukuda, S., Furuno, M., Hiramoto, K., Hiraoka, T., Hirozane, T., Hayashida, K., Hayatsu, N., Hiramoto, K., Miraoka, T., Hirozane, T., Hori, F., Imotani, K., Ishii, Y., Itoh, M., Kagawa, I., Kasukawa, T., Kotoh, H., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohsatoh, N., Okazaki, Y., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N., Okazaki, Y., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Tagami, M., Tagawa, A., Takahashi, F., Takku-Akahira, S., Muramatsu, M., and Hayashizaki, Y., Taya, T., Yasunishi, A.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Group Phase I & II Team.
Analysis of the mouse transcriptome of 60,770 full-length cDNAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (16-JUL-2001) Yoshihide Hayashizaki, The Institute Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GS RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokanagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.jp, URL:http://genome.gsc.riken.jp/, Tel:81-45-503-9222,
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Please visit our web site for further
URL:http://genome.gsc.riken.jp/
URL:http://fantom.gsc.riken.jp/.
Location/Qualifiers
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Fax:81-45-503-9216)
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RITPSDLSAIATTIKPGLALSLGVGLSFSLQLVNQFKKPFIPIHHMEAHALTIRLTNK
VEFPFILVLLISGGHCLLALVQGVSDFILLGKSLDIAPGDMLDKVARRLSLIKHPECST
                                                                                                                                                                                /note="unnamed protein product; putative similar to PUTATIVE SIALOGLYCOPROTEASE TYPE 2 sapiens] (SPTR | Q9H4B0, evidence: FASTY, 80%ID,
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/db xref="FANTOM DB:B230219017"
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**Exploration Research** functional annotation

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                                                                                                                    Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. RIKEN integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer Genome Res. 10 (11), 1757-1771 (2000)
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MUS musculus 10 days embryo whole body cDNA, RIKEN full-length enriched library, clone:2610001M19 product:similar to PUTATIVE SIALOGLYCOPROTEASE TYPE 2 [Homo sapiens], full insert sequence.
                           The RIKEN Genome Exploration Research
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High-efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
    FANTOM Consortium.
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GCAGAAGCTGCCATAAAAAGTACCGCGATTAAAAATGGCACTT 1462
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Sciurognathi; Muridae;
                           Group
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; Murinae; Mus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute c Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Turumi-ku, Yoko Kanagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.jp, URL:http://genome.gsc.riken.jp/, Tel:81-45-503-9222, Fax:81-45-503-9216)
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Analysis of the mouse transcriptome of 60,770 full-length CDNAs
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6 (bases 1 to 1622)
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                                                                       GVDISREVAEAAIKVPRLKMAL'
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207._.1451
                        note="putative"
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/clone_lib="RIKEN full-length enriched mouse
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/strain="C57BL/6J"
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          SerAlaAlaAspIleAlaAlaThrValGlnHisThrMetAlaCysHisLeuValLysArg 300
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PUBMED
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AUTHORS
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Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,

Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,

Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,

Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,

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Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,

McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,

Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,

Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,

Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,

Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,

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Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,

Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E.,

Generation and mouse cDNA semences
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Mus musculus O-sialoglycoprotein
clone IMAGE:1226118), containing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus
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Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Marcello Bento Soares, Ph.D.
cDNA Library Preparation: M. Bento Soares, University
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LL
                                                               NIH-MGC Project URL: ht
                                                                                                                                                                                 Strausberg, R.
                                                                                                                                                                                                                                                  human and mouse cDNA sequences Proc. Natl. Acad. Sci. U.S.A.
                                                                                                                                                                  Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (bases 1 to 1609)
                                                                                                                                                                                                    (bases 1 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; Metazoa; Chordata;
Eutheria; Rodentia;
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                                                                                http://mgc.nci.nih
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401 GlyGluAlaSerIleLysValProGlnLeuLysMetGluIle 414
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407 GCAGAAGCTGCCATAAAAGTACCGCGATTAAAAATGGCACTT 1448
                                                          ThrHisArgAlaIleLeuPheCysLysGlnArgAspLeuLeuProGlnAsnAsnAlaVal
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                                                                                                                                                                                                     ThrAsnAlaThrGlnCysThrLeuLeuCysProProProArgLeuCysThrAspAsnGly
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mRNA linear endopeptidase-like frame-shift errors. 1, mRNA (cDNA HTC 19-NOV-2003

Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus

16899-16903

Submitted (20-MAY-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,

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Percent Similarity:
Best Local Similarity:
Query Match:
DB:
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This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 21312463
This clone has the following problem: frame shifted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  contact: amadan@systemsbiology.org
Anup Madan, Jessica Fahey, Erin Helton,
Madan, Stephanie Rodrigues, Amy Sanchez
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA Sequencing by: Institute for Systems http://www.systemsbiology.org
                                                                                                                                                                                                                                                                                                                                                                                                               GluPheLeuArgSerPheAsnPheHisProGlyThrLeuPheLeuHisLysIleValLeu
                                                                                        SProPheIleProIleHisHisMetGluAlaHisAlaLeuThrIleArgLeuThrAsnLy
                                                                                                                                                                                                                                            SValGluPheProPheLeuValLeuLeuIleSerGlyGlyHisCysLeuLeuAlaLeuVa
                                                                                                                                           GGCCCTAAGCTTGGGAGTTGGCTTATCCTTTAGCTTACAGCTAGTAAATCAGTTTAAAAA
                                                                                                                                                        uAlaLeuSerLeuGlyValGlyLeuSerPheSerLeuGlnLeuValGlyGlnLeuLysLy
                                                                                                                                                                                            TGCCTGTAGAATCACCCCAAGCGATCTCTCAGCAATTGCAACTACCATCAAACCGGGACT
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                                                                                                                                                                                                                                                                                                             LeuGlyGluAlaIleHisSerGlnThrGluValHisLeu-LysThrGlyGlyIleValPr
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/clone_lib="Soares_thymus_2NbMT"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Mus musculus"
/mol_type="mRNA"
/strain="C57BL/6J"
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78.80%
76.89%
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Indels:
Gaps:
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Matches:
Conservative:
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870 bp
AGENCOURT_7790948 NIH_MGC_72 Homo
5', mRNA Bequence.
BQ423651
BQ423651.1 GI:21118966
EST.
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 870)

NIH-MCC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)
                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                             lGlyGluAlaSerIleLysValProGlnLeuLysMetGluIle 414
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                                                                                                                                                                   (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -TGATGTCCTCTTGGAGTAGACATATCCAGAGAAGT
                                                                                                                                                                                                                                                                                sapiens cDNA clone IMAGE: 6065828
                                                                                                                                                                                                                                                                                                       mRNA
                                                                                                                                                                                                                                                                                                       linear
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Tissue Procurement: ATCC/DCTD/DTP
CDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.B. Consortium (LLN
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MCC clone distribution information
found through the I.M.A.G.B. Consortium/LLNL at:
http://image.llnl.gov
http://image.llnl.gov
plate: LLAM13342 row: 1 column: 21 Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov High quality sequence stop: 710 Can

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                                                              ArgAspLeuLeuProGlnAsnAsnAlaValLeuValAlaSerGlyGlyValAlaSerAsn 330
                                                                                                            HisThrmetAlaCysHisLeuValLysArgThrHisArgAlaIleLeuPheCysLysGln
                                                                                                                                                          GluGlyIleGluLysGlyGlnIleLeuSerSerAlaAlaAspIleAlaAlaThrValGln
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PheTyrIleArgArgAlaLeuGluIleLeuThrAsnAlaThrGlnCysThrLeuLeuCys 350
                                                                                                                                                                                              TTTTCTTTTACTGGACTTCAACACGTTACTGATAAAATAATAATGAAAAAGGAAAAAAGAG
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Average insert size 2 kb. Library constructed by Life
Technologies."
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BX391919
BX391919.2
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 852)

Li,W.B., Gruber,C., Jessee,J. and Polayes,D.

rull-length cDNA libraries and normalization

Unpublished (2001)

On May 13, 2003 this sequence version replaced gi:30611736.

Contact: Genoscope

Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genoscope - Centre National de Sequencage
2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex - FRANCE
2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex - FRANCE
Email: seqref@genoscope.cns.fr, Web: www.genoscope.cns.fr
1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime
1st strand cDNA was primed cDNA was digested with Not I and cloned
end enriched, double-strand cDNA was digested with Not I and cloned
into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library
was normalized. Library was constructed by Life Technologies, a
division of Invitrogen. This sequence belongs to sequence cluster
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BX391919 Homo sapiens HELA CELLS CDNA clone CSODKOO1YEO2 3-PRIME,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                For more information about this cluster, see http://www.genoscope.cns.fr/cdna?s=CSOBAIO35ZEO7_CSO3317_1&c=1240
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                                                                                                                                                                                                                                                                                                                                                                                 /Cell type="HELA CELLS COT 25-NORMALIZED"
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/note="Telt strand cDNA was primed with a NotI-oligo(dT)
/note="Telt strand cDNA was primed with a NotI-oligo(dT)
primer. Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and EcoR V
sites of the pCMVSPORT 6 vector. Library was normalized."
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Eukaryota; Metazoa; Chordata; Craniata; Ver Mammalia; Butheria; Primates; Catarrhini; F 1 (bases 1 to 922)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Ge Unpublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: DCTD/DTP/Gazdar
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5', mENA sequence.
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EST.
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cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLCMZ603 row: d column: 15
High quality sequence stop: 584.
Location/Qualifiers
                                                                                                                                                                                             eLysProProLeuHisHisAlaLysAsnCysAspPheSerPheThrGlyLeuGlnHisVa
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                                                      GAGTGGTGGGAAAGCCATAGAACATTTGGCCAAACAAGGAAATAGATTTCATTTTGACAT
                                                                   tSerGlyGlyLysAlaIleGluHisLeuAlaLysGlnGlyAsnArgPheHisPheAspI1
                                                                                                                                                MetLeuAspLysValAlaArgArgLeuSerLeuIleLysHisProGluCys-SerThrMe
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/tlosue_type="large cell carcinoma"
/tlab host="DH10B (phage-resistant)"
/clone lib=NIH MGC 18"
/clone lib=NIH MGC 18"
/clone lib=NIH MGC 18"
/clone lib=NIH MGC 18"
/note="Organ: lung; Vector: pOTB7; Site_1: XhoI; Site_2:
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GGCACGAG(G). Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-CDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies). Note: this is a NIH_MGC Library."
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/db_xref="taxon:9606"
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EST.
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CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov
Plate: LLCM814 row: n column: 09
High quality sequence stop: 701.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
Tissue Procurement: DCTD/DTP
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National Institutes of Health, Mammalian Gene
Unpublished (1999)
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                   /tissue type="adenocarcinoma cell line"
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/clone lib="NIH_MGC 9"
/clone ="organ: ovary; Vector: pOTB7; Site 1: XhoI; Site 2:
/note="organ: ovary; Vector: pOTB7; Site 1: XhoI; Site 2:
/coRI, cDNA made by oligo-dT priming. Directionally cloned into EcoRI/XhoI sites using the following 5' adaptor: GGCACGAG(G). Size-selected >500bp for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies)."
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/mol_type="mRNA"
/db_xref="taxon:9606"
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Bdlg. 200 Rm2A B
Tel: 3015048416
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Single pass sequencing. Bases called and trimmed with p
0.000925 using options trim_alt "-trim fasta. Vector
by cross_match using options -minmatch 12 -minscore 18
plate: 45 row: M column: 02
Seq primer: CCCAGTCACGACGTTGTAAAACG
High quality sequence stop: 749.
Location/Qualifiers
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Animal and Natural Resources Institute
Bdlg. 200 Rm2A BARC-East, Beltsville, MD
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Contact: Tad S. Sonstegard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    activated bovine gut
 GAGGCTCATGCACTCACTATTAGGTTAACAAATAAGGTAGAATTTCCGTTTTTAGTTCTT
                                                                                                                                                                                           LeuSerAlaIleAlaThrThrIleLysProGlyLeuAlaLeuSerLeuGlyValGlyLeu 128
                                                                                                                                                                                                                                    GluAsnIleGlnArgIleValGlnGluAlaLeuSerAlaSerGlyValSerProSerAsp
                                                                                                                                    SerPheSerLeuGlnLeuValGlyGlnLeuLysLysProPheIleProIleHisHisMet 148
                                                                                                                                                                                                                                                                                              ACTGAAGTTCATTAAAAACAGGTGGGATTATTCCTCCAGTAGCTCAACAGCTTCATAGA
                                                                                       GluAlaHisAlaLeuThrIleArgLeuThrAsnLysValGluPheProPheLeuValLeu
                                                                                                                     TCGTTTAGCTTACAACTGGTAGACCAGTTTAAAAAAGCCCTTCATTCCCCATTCATCACATG
                                                                                                                                                                                                                                                                                                              ThrGluValHisLeuLysThrGlyGlyIleValProProAlaAlaGlnGlnLeuHisArg
                                                                                                                                                                                                                                                                                                                                                                     ThrAlaAlaAlaValValAspGluThrGlyAsnValLeuGlyGluAlaIleHisSerGln
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="Organ: Abomasum; Vector: pAgen-1; Site 1: EcoRV; Site 2: Not1; Equimolar amounts of mRNA extracted from fundic and pyloric abomasums of 18 and 21 week old steers. Exposure to Ostertagia ostertagi was initiated at 15 weeks of age. fundic and pyloric abomasum"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /tissue_type="Pooled"
/dev_stage="Multiple"
/lab host="DH10B T1 phage resistant"
/clone_lib="BARC 9BOV"
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/mol_type="mRNA"
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/clone="9BOV45_M02"
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/strain="Holstein"
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SILH03c19e02f1 squirrel heart
clone 19e02 5', mRNA sequence.
CO73Rone
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Microarray analysis of transcriptional changes during hibernation in the golden mantled ground squirrel, Spermophilus lateralis Unpublished (2004)
                                                                                                                                                                                                                                                                                                                                                                                    Plate: 19 row: e column: 02
Seq primer: pflc T7 (5'-AATACGACTCACTATAGGG-3')
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  School of Biological Sciences, The Biosciences Building, Street, Liverpool, United Kingdom, L69 7ZB
Tel: +44(0)151-795-4510
Fax: +44(0)151-795-4431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Laboratory for Environmental Gene Regulation University of Liverpool
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                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: cossins@liv.ac.uk
Vector has been trimmed from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Andrew R. Cossins
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/tissue_type="Heart"
/dev stage="Adult"
/lab_host="E.coli Electromax DH10B"
/lab_host="E.coli Electromax DH10B"
/clone_lib="squirrel heart library 1"
/note="Vector: pFLC; Site 1: Sall GTCGAG; Site 2: BamHI GGATCC; Normalized and subtracted CDNN, library propared from heart of hibernating and summer animals"
                                                                                                                                                                                                                              /organism="Spermophilus
/mol_type="mRNA"
/db_xref="taxon:76772"
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NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene
Unpublished (1999)
                                                                                                                                          BM907988 1109 bp
AGENCOURT 6707465 NIH MGC_119 Homo
5', mRNA sequence.
BM907988
                                         Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates; 1 (bases 1 to 1109)
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                                                                                                               BM907988.1 GI:19358367
EST.
                                                                                   Homo sapiens
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                                                         Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
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Tissue Procurement: Life Technologies, Inc.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.B. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov plate: LLAMM12767 row: b column: 07 High quality sequence stop: 602.
Location/Qualifiers
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                                                                                                                                                  AlaSerGlyValSerProSerAspLeuSerAlaIleAlaThrThrIleLysProGlyLeu
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                       CCATTCATTCCCATTCATCATATGGAGGCTCATGCACTTACTATTAGGTTGACCAATAAA
                                     ProPheIleProIleHisHisMetGluAlaHisAlaLeuThrIleArgLeuThrAsnLys
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/note=Torgan: brain; Vector: pCMV-SPORT6; Site 1: NotI;
/note=Torgan: brain; Vector: pCMV-SPORT6; Site 1: NotI;
/site 2: EcoRV (destroyed); RNA source normal medulla from anonymous male age 27. Library is oligo-dT primed and directionally cloned (EcoRV site is destroyed upon cloning). Average insert size 1.3 kb, insert size range 0.9-3 kb. Library is normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 013. Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone="IMAGE:5744934"
/tissue_type="medulla"
/lab_host="DH10B"
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/db_xref="taxon:9606"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rattus norvegicus
Rattus norvegicus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                 Average Phred score is 20 or better. All 20) and vector/linker sequence has been 1 High quality sequence stop: 765.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                      Contact: Shultz MA
Dept. of Molecular Biosciences, School
University of California, Davis
1311 Haring Hall, One Shields Avenue,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CF114247
765 bp mRNA linear EST 23-JUL Shultzomica07498 Rat lung airway and parenchyma cDNA libraries Rattus norvegicus cDNA clone NA4935 5', mRNA sequence.
                                                                                                                                                                                                                                                                             Email: mashultz@ucdavis.edu
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ltz,M.A., Zhang,L.,
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530 752 4698
/CLUME - NO..../
/ESK="Male"
/tissue_type="airway or parenchyma"
/dev stage="adult"
/dev stage="adult"
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/note="Organ: lung; vector: pGEM-11Zf(-); Site_1 = 1: Eco RI;
Site_2: Not I; mRNA was isolated from microdissected rat
lunc airways and parenchyma tissues."
                                                                                                                                         /organism="Rattus norvegicus"
/mol_type="mRNA"
/strain="Sprague-Dawley"
/db_xref="taxon:10116"
                                                                                                                             /db_xref="taxon;
/clone="NA4935"
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ORS Wistow,G., Bernstein,S.L., Wyatt,M.K., Ray,S., Behal,A., Touchman,J.W., Bouffard,G., Smith,D. and Peterson,K.
Expressed sequence tag analysis of human retina for the NEIB Project: Retbindin, an abundant, novel retinal cDNA and alter splicing of other retina-preferred gene transcripts
Mol. Vis. 8 (4), 196-204 (2002)
E 22103461
D 12107411
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National Eye Institute
6/331, NIH, Bethesda, MD 20892-
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plate: 03 row: d column: 11
Seq primer: M13RP1 reverse primer (ABI).
Location/Qualifiers
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             LysLysGluLysGluGlvIleGluLysGlyGlnIleLeuSerSerAlaAlaAspIle 285
                                                                       AlaLysAsnCysAspPheSerPheThrGlyLeuGlnHisValThrAspLysIleIleMet
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301 496 0078
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unamplified): hd/he"
unamplified): hd/he"
/note="Organ: Eye; Vector: pspORT1; Neural retina tissue
was dissected from two 80 year old donors with no observed
eye disease. 100ug of total RNA was used for library
construction. A directionally cloned cDNA library in the
pspORT1 vector (Life Technologies) was constructed at
Bioserve Biotechnology (Laurel MD) essentially following
the protocols of the Superscript plasmid System full
details of which are contained in the manufacturer's
Instruction manual (http://www.lifetech.com/). First
                                                                                                                                                                                                                                                                                                                                                                                                        primer-adapter [5'-pGACTAGTTCTAGATCGCGAGCGGCCCC(T)15-3']. EST analysis was performed on the unamplified library at the NIH Intramural Sequencing Center (NISC)."
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/dev_stage="Adult"
/lab_host="EMDH10B"
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/db_xref="taxon:9606"
/clone="hd03d11"
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Percent Similarity:
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Query Match:
DB:
US-10-649-273-2 (1-414) x CN823245
                                                                                                                                                                                                                                                                                                                    Gossner, A. and Hopkins, J.
Gossner, A. and Hopkins, J.
Ovine spleen\brain cDNA library
Unpublished (2004)
Contact: J Hopkins
Veterinary Biomedical Sciences
University of Edinburgh
Summerhall Square, Edinburgh, EH9
Email: j.hopkins@ed.ac.uk
Plate: 04 row: N column: 08
Seq primer: M13reverse
High quality sequence start: 6
High quality sequence start: 50.
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
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                                                                                                                                                                                    /clone="Oa_splbn_04N08"
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Bovine Functional C
ANRI
BLDG 162: BARC-EAST
Tel: 3015048604
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                                                                                                                                                                                              4057170 BARC sequence. CK833139
                          Intestina. (2004)
Unpublished (2004)
Contact: Richard G. Baumann
Contact: Richard Genomics
                                                                                    1 (bases 1 to 661)
Baumann, R.G., Baldwin, R.L., Sonstegard, T.S.,
Matukumalli, L.K.
                                                               Construction and Analysis of a cDNA Library Generated From Intestinal Muscle and Epithelial Tissues of Holstein Cattle
                                                                                                                    Bovinae; Bos.
                                                                                                                                Mammalia;
                                                                                                                                                     Bos taurus
                                                                                                                                                                Bos taurus (cow)
                                                                                                                                                                                    CK833139.1 GI:45061881
                                                                                                                                         Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                     GlnAsnAsnAlaValLeuValAlaSerGlyGly 326
                                                                                                                                                                                                                                                                                                                              HisLeuValLysArgThrHisArgAlaIleLeuPheCysLysGlnArgAspLeuLeuPro
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                                                                                                                                                                                                                                                                                                                                                                                                    CTTCAACATGTTATTGATAAGATGATAATGCAGAAGGAAAAAGAGGAAGGTATCGAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                        HisPheAspIleLysProProLeuHisHisAlaLysAsmCysAspPheSerPheThrGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CysSerThrMetSerGlyGlyLysAlaIleGluHisLeuAlaLysGlnGlyAsnArgPhe
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 162: BARC-EAST,
3015048604
                                                                                                                              Eutheria;
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                                                                                                                                                                                                                   Bos taurus
                                                                                                                             Chordata; Craniata; Vertebrata;
Cetartiodactyla; Ruminantia; Pec
           Beltsville,
                                  Lab
                                                                                                                                                                                                                bp mRNA linear EST 04-MAR-2004 CDNA clone 8BOV_20020 5', mRNA
           ₹
           20705,
           ₫SD
                                                                                               Van Tassell, C.P.
                                                                                                                              Pecora;
                                                                                                                              Euteleostomi;
cora; Bovidae;
                                                                 Cattle
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Email: rbaumann@anri.barc.usda.gov
Single pass sequencing. Bases called and trimmed with phred
0.000925 using options -trim_alt ' -trim_fasta. Vector identified
by cross match using options -minmatch 12 -minscore 18
Plate: 20 row: 0 column: 20
Seq primer: CCTATTTAGGTGACACTATAGAAC
High quality sequence stop: 661.
Location/Qualifiers
1. 661
/mol_type="mRNA"
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/strain="Holstein"
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/sex="Female"
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/fissue_type="Epithelial, Muscle"
/fissue_type="Bille TonA"
/clone=lib="BARC 8BOV"
/note="Organ: Intestine; Vector: pCMVSport6.1; Site_1:
NotI; Site_2: EcoRI; Normalized cow cDNA intestinal
library in pCMVsport6.1, constructed from equimolar mRNA
pools derived from 5 sources 4 lactating intestinal, 1
neonatal intestinal 4/5 Lactating, Proximal Duodenum,
Jejunum, Distal Ileum, Colon, 1/5 Neonatal, Proximal
ORIGIN
Alignment Scores:
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Pred. No.: 4.98e-106 Length: 661 Score: 203 Score: 95.48% Conservative: 8 Best Local Similarity: 91.86% Mismatches: 9 Guery Match: 7 Gaps: 1 US-10-649-273-2 (1-414) x CK833139 (1-661)

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ACCESSION
VERSION
KEYWORDS
SOURCE
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AUTHORS
TITLE
JOURNAL
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BQ433135
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Best Local Similarity:
Query Match:
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BQ433135 BQ433135.1 GI:21172211 EST.
                     21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 879)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov plate: LLAM13213 row: d column: 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LeuIleLysHisProGluCysSerThrMetSerGlyGlyLysAlaIleGluHisLeuAla
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                                                   MetLeuIleLeuThrLysThrAlaGlyValPhePheLysProSerLysArgLysValTyr
GluPheLeuArgSerPheAsnPheHisProGlyThrLeuPheLeuHisLysIleValLeu 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     quality sequence stop: 674.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                          /organism="Homo sapiens"
/mol type="mRNA"
/db xref="taxon:9606"
/db xref="taxon:9606"
/clone="IMAGE:6016098"
/clone="IMAGE:6016098"
/tissue_type="embryonal carcinoma, cell line"
/lab host="DH10B (phage-resistant)"
/lab host="PH10B (phage-resistant)"
/clone lib="NIH MGC 92"
/note="Organ: testis; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: Sall; Cloned unidirectionally; oligo-dT primed.
Average insert size 2.5 kb. Library enriched for
full-length clones and constructed by Life Technologies.
Note: this is a NIH_MGC Library."
                                                                                                                                                          1.39e-103
1018.50
94.67%
93.33%
47.93%
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Matches:
Conservative:
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Indels:
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                                                                                                                                                                                                                                                                                                                                                 GCTTTAAGCCTGGGAGTGGGCTTATCATTTAGCTTACAGCTGGTAGGACAGTTAAAAAAG
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                                                                                                                                     GlnGlyValSerAspPheLeuLeuLeuGlyLysSerLeuAspIleAlaProGlyAspMet
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ATGGAANGGGT
                                                                  GCTTGACAAGGTGGGCAAGAAAGACTTTCTTTNATAANAACATTCCAAAGTGCTCCCCCC
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                                  etSerGlyGly
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Search completed: November 11, 2005, 02:14:03 Job time : 5885 secs

정 음 성 음 성 음

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Minimum
Maximum
                                                                                                                                                                                                                                                         Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -MODEL-frame+_p2n.model -DEV=xlp
-Q=/cgn2_1/USPTO_spool_p/US10649273/runat_02112005_091339_15581/app_query.fasta_1.1429
-Q=/cgn2_1/USPTO_spool_p/US10649273/runat_02112005_091339_15581/app_query.fasta_1.1429
-DB=Issued_Patents_NA_OPMT=fastap_-SUPFIX=p2n.rni -MINMATCH=0.1 -LOOPCL=0
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-MODE-LOCAL_OUTEMT=pto_-NORM-ext_-HEAPSIZE=500_-MINLEN=0_-MAXLEN=2000000000
-USER-US10649273_GCGN_1_1_177_@runat_02112005_091339_15581_-NCPU=6_-ICPU=3
-NO_MMAD_-LARGEQUERY_-NEG_SCORES=0_-WAIT_-DSPBLOCK=100_-LONGLOG_-DEV__TIMEOUT=120_-WARN__TIMEOUT=30_-THREADS=1_-XGAPOP=10_-XGAPEXT=0.5_-FGAPOP=6_-FGAPEXT=7_-YGAPOP=10_-YGAPPOP=10_-SDELOCK=0_-DELEXT=7_-
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2090.5
1747
1385
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1: /cgn2_6/ptodata/1/ina/5A_COMB.seq:*

2: /cgn2_6/ptodata/1/ina/5B_COMB.seq:*

3: /cgn2_6/ptodata/1/ina/6A_COMB.seq:*

4: /cgn2_6/ptodata/1/ina/6B_COMB.seq:*

5: /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*

6: /cgn2_6/ptodata/1/ina/backfiles1.seq:*
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Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
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US-10-067-443-1
US-10-067-443-21
US-99-774-528-177
US-10-067-443-23
US-10-067-443-23
US-10-067-443-28
US-09-596-002-38
US-09-540-236-806
US-09-525-991A-801
US-09-525-991A-884
US-09-543-6612
US-09-543-6612
US-09-902-540-5612
US-09-902-540-503
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US-08-916-421B-1	US-08-311-731A-130	US-09-710-279-727	US-09-710-279-3985	US-08-311-731A-131	US-08-545-528D-1	US-09-724-623-19	US-09-328-352-483	US-09-103-840A-1	US-09-103-840A-2	US-09-221-017B-794	US-09-602-777A-147	US-09-438-185A-1	US-09-198-452A-1	US-09-790-988-1	US-08-781-986A-102	US-08-956-171E-102	US-09-149-624-1	US-09-134-001C-1072	US-09-107-433-1618	US-09-583-110-2196	US-09-134-000C-1551	US-09-066-512-1	US-08-961-527-214	US-09-536-784-51	US-08-961-083-51	US-08-987-121A-3	US-08-987-121A-5	US-09-107-532A-2955	US-09-489-039A-2050	US-09-643-990A-1	US-09-557-884-1	US-08-087-797-1
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## ALIGNMENTS

RESULT 1 US-10-067-443-1

Percent Similarity:
Best Local Similarity:
Query Match: Score: Alignment Scores: US-10-067-443-1 Sequence 1, Application US/10067443
PATENT NO. 6642041
GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED
TITLE OF INVENTION: SPINAL CORD, MP-1
FILE REFERENCE: D0073 NP
CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2002-02-05 PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOFTWARE: Patentin version 3.0
SEQ ID NO 1 NAME/KEY: CDS LOCATION: (231)..(1472) FEATURE: TYPE: DNA
ORGANISM: Homo sapiens LENGTH: 2197 No.: 5.72e-261 2125.00 100.00% 100.00% Length: Matches: Conservative: Mismatches: Indels: 0000 2197 414

US-10-649-273-2 (1-414)

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                         ThrasnalaThrGlnCysThrLeuLeuCysProProProArgLeuCysThrAspAsnGly 360
                                                                               ThrHisArgAlaIleLeuPheCysLysGlnArgAspLeuLeuProGlnAsnAsnAlaVal
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DB:
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Best Local Similarity:
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LENGTH: 1387
TYPE: DNA
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TITLE OF INVENTION: POLYNUCLECTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED
TITLE OF INVENTION: SPINAL CORD, MP-1
FILE REFERENCE: DO073 NP
CURRENT FILING DATE: 2007-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR FILING DATE: 2001-02-05
PRIOR FILING DATE: 2001-02-05
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
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                                                                                                                                                 ProAlaAlaGlnGlnLeuHisArgGluAsnIleGlnArgIleValGlnGluAlaLeuSer
                         GCTTTAAGCCTGGGAGTGGGCTTATCATTTAGCTTACAGCTGGTAGGACAGTTAAAAAAG
                                          AlaLeuSerLeuGlyValGlyLeuSerPheSerLeuGlnLeuValGlyGlnLeuLysLys
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ProPheIleProIleHisHisMetGluAlaHisAlaLeuThrIleArgLeuThrAsnLys
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RESULT 3
US-09-774-528-177
                                                                                   Sequence 177, Application Patent No. 6743619
GENERAL INFORMATION:
APPLICANT:
APPLICANT:
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Tang, Y. Tom
Zhou, ping
Zhou, ping
Goodrich, Ryle
Liu, Chenghua
Asundi, Vinod
Ren, Feiyan
Zhang, Jie
Zhao, Qing A.
Yang, Yonghong
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; APPLICANT: Wehrman, Tom
; APPLICANT: Wang, Jian-Rui
; APPLICANT: Wang, Junrui
; APPLICANT: Wang, Dunrui
; APPLICANT: Wang, Dunrui
; APPLICANT: Drmanac, Radoje T.
TITLE OF INVENTION: No. 6743619el Nucleic A
; TITLE OF INVENTION: Polypeptides
FILE REFERENCE: 802
CURRENT APPLICATION NUMBER: US/09/774,528
; CURRENT FILING DATE: 2001-01-30
; NUMBER OF SEQ ID NOS: 441
; SOFTWARE: pt_FL_genes Version 2.0
SEQ ID NO 177
; LENGTH: 1416
TYPE: DNA
; ORGANISM: Homo sapiens
; NAMEKEY: CDS
; NAMEKEY: CDS
; LOCATION: (205)..(1305)
US-09-774-528-177
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Matches:
Conservative:
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Best Local Similarity:
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                                                                                                                                                                                                                                                                                                                                               SEQ ID NO 23
LENGTH: 1526
TYPE: DNA
ORGANISM: homo s
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Patent No. 6642041
GENERAL INFORMATION:
APPLICANT: BRISTOL-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLECTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY
TITLE OF INVENTION: SPINAL CORD, MP-1
FILE REFERENCE: D0073 NP
                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGCAGAGCTCTGGAAATTTTAACAAACGCAACACAGTGCACTTTGTTGTGTGCCTCCTCCC 1119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTACCTCAAAATAATGCAGTACTGGTTGCATCTGGTGGTGTCGCAAGTAACTTCTATATC 1059
LeuLeuGlyLysSerLeuAspIleAlaProGlyAspMetLeuAspLysValAlaArgArg
                                                              LeuLeuIleSerGlyGlyHisCysLeuLeuAlaLeuValGlnGlyValSerAspPheLeu 187
                                                                                                                             MetGluAlaHisAlaLeuThrIleArgLeuThrAsnLysValGluPheProPheLeuVal
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                                                                                   US-10-067-443-20
        Percent Similarity:
                                      Pred. No.:
                                                                                                                                                          Sequence 20, Application US/10067443

Patent No. 6642041

GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
APPLICANT: Bristol-Myers Squibb Company
APPLICANT: Bristol-Myers Squibb Company
APPLICANT: Bristol-Myers Squibb Company
APPLICATION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED
TITLE OF INVENTION: SPINAL CORD, MP-1
TITLE OF INVENTION: SPINAL CORD, MP-1
FILE REFERENCE: D0073 NP
CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2001-02-05
PRIOR PRILING DATE: 2001-02-05
PRIOR PILING DATE: 2001-02-05
PRIOR PILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOFTWARE: Patentin version 3.0
                                                                                                                                                 SEQ ID NO 20
                                                                                               LENGTH: 14364
TYPE: DNA
ORGANISM: homo sapiens
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      2.19e-139
1186.50
32.30%
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        Length:
Matches:
Conservative:
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11582 TCAAGCCCATTTTCCAACCAATAGAAGAGCAAACATAGACAGGGGCAGTGATTGGCCTCT 11641	204 204	11522 TAGGAAGTATAGGACAAGTTCTTATTATTGACGTTCATCATTAAGCAGTTATTGTCAACT 11581	204 204	GCCATATATAGGAAAACAAACAAACAAACAAACACTGCTTCCCACAGTGAAATAA 1		204 204 207 208 208 208	ATATAGATTAACATAAGGACATTAAAGATGCAATGCACAGAATTAAATCACACAATTACT 1	204 204	11282 ATGTGAAAGAACGTGCTTCGTAAACTAACATACTGCAAAAAAGGTAAAATAAGAGAATAT 11341		204	AAGAGTAGTACACAATTTTATAATTCTTAGCCTTTCTTAATAAAATGGTAAGAGGTTCAT 11	204 204	11102 TATTTCTGAATTTTATCTTAGTAAACTGAAAAAAATTCACATATGGTGAGAAAAAATAGA 11161	204 204	11042 TTTGTTATGTTGTCCATTTCAACTAAGTAGCAATAGATGTGCTACCACCATTCACCTAAA 11101	204 204	10983 GACATAGCACCAGGTGACATGCTTGACAAGGT-AATTAAGAATTAATTTCTCCATTCTTT 11041	pIleAlaProGlyAs	174 HisCysLeuLeuAlaLeuValGlnGlyValSerAspPheLeuLeuLeuGlyLysSerLeu 193 	10863 ACTATTAGGTTGACCAATAAAGTAGAATTTCCTTTTTTAGTTCTTTTGATTTCTGGAGGT 10922	154 ThrIleArgLeuThrAsnLysValGluPheProPheLeuValLeuLeuIleSerGlyGly 173	CTGGTAGGACAGTTAAAAAAGCCATTCATTCATCATCATATGGAGGCTCATGCACTT 1	134 [enVa]GlwClm[enive]veCrophelleDrolleHieMetGlnBleLieni 1	114 ThrThrIleLysProGlyLeuAlaLeuSerLeuGlyValGlyLeuSerPheSerLeuGln 133	10683 ATAGTACAAGAAGCTCTTTCTGCCAGTGGAGTCTCTCCAAGTGACCTCTCAGCAATTGCA 10742	lGlnGluAlaLeuSerAlaSerGlyValSerProSerAspLeuSerAlaIleAla 113	:::	74	* Gaps:	Local Similarity: 32.20% Mismatches: 2 Match: 55.84% Indels: 657
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12662 TCCAACTTTCGTGACACTAATGTTGATAAAGTTCTGATAATCCACTATATTGTACCAGCC 12721		ATCCCTTTGTTTGTTTTTTTTTAATAAGCCAGTCAAATTTAGCAGTGGAGGTGGTAT	321	12542 GCAGTAACTGCTATCACTATTTTTAGAAAAATAGGTGGATTTCCTTCATCCTTTGATGAA 12601	321 321	12482 AGTCTAATTTTGCATCTTCTTGGATTTAAAAGAGGGGCTTACAATAAAGAAAG	321	CATTTCTTATACTACTTCGCTAGCTTTAGCGCTATAGCTTCTAGCTTTTAGCTTTTAGCACACACA	12362 CITTATGCCTTATGCTAGCCCTGACAGTATGAAATTATGCAGGATAGGAAAGACTAACAG 12421		12302 CACTTTGCAATATGTTACTTTTTTCCCAAGACCTTGACCTTGTGTTTAGGATGAACAGAT 12361	321	312 DEGUESTE OUTHABUNSHALD VALLEUT.  12242 CTTGTTACCTCAAAATGAATGCAGTACTGGTAAGTTTATGTCAGTTATTGTAGTAATAGTTA 12301	AATOGCATUICATCITOTOAAAAAAAAACAATCOGGCTATTUTGTTTTTGTAAGCAOAGAGA	292	TATTGAGAAGGGCAAATCCTGTCTTCAGCAGCAGACATTGCTGCCACAGTACAGCACAC	272 yIleGiuLysGlyGInIleLeuSerSerAlaAlaAspTleAlaAlaThrValGInHisTh	AAAGTTGAACAGATAAATATTCCTGGATTGTGCCTAAAAATAGCTGCTCATTTCTGCAGG	272G1 272			238 AspIleLysProProLeuHisHisAlaLysAsnCysAspPheSerPheThrGlyLeuGln 257		218 ThrMetSerGlyGlyLysAlaIleGluHisLeuAlaLysGlnGlyAsnArgPheHisPhe 237	11822 AATATGTTTCTTTGATAGGTGGCAAGAAGACTTTCTTTAATAAAACATCCAGAGTGCTCC 11881	TTTCAATTTATTTCCTTTGCATCTTTTCGTTTCACAGTATTTAATTTTATGACTCTAAAA		11702 TATATTTGCCAAAGTATAGCATGTTTTATTCATTCAGGGGGTTTTTTGTTTG	204 204	11642 TATTGTTCGGGTCATCATAAGGAACAGGGTTGTCTGCTTACCTGAATATCAGCTATAGTC 11701	204 204

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APPLICANT: Patterson, Chandra
APPLICANT: Berg, Kim, L.
TITLE OF INVENTION: UNCLEOTIDE SEQUENCES OF
FILE REFERENCE: PM-0008-4 US
CURRENT APPLICATION NUMBER: US/09/596,002
CURRENT FILING DATE: 2000-06-16
PRIOR APPLICATION NUMBER: 60/140,121
PRIOR APPLICATION NUMBER: 60/140,121
PRIOR FILING DATE: 1999-06-18
NUMBER OF SEQ ID NOS: 41
SOFTWARE: PERL PROGram
SEQ ID NO 38
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APPLICANT:
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FEATURE:
NAME/KEY: misc_feature
OTHER INFORWATION: Incyte template ID No. 6632636;
PUBLICATION INFORMATION:
US-09-596-002-38
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                                                                                                                                                         SerPheThrGlyLeuGlnHisValThrAspLysIleIleMetLysLysGluLysGluGlu
                                                                                                                                                                                                                           GlyAsnArgPheHisPheAspIleLysProProLeuHisHisAlaLysAsnCysAspPhe
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|GTATTGGGATTGGAGACATCTTGTGATGAAACAGGGCTTGCCATCTATGATAGTACGATG 23932
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     ThrMetAlaCysHisLeuValLysArgThrHisArgAlaIleLeuPheCysLysGlnArg
                                                                               GlyIleGluLysGlyGlnIleLeuSerSerAlaAlaAspIleAlaAlaThrValGlnHis
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Matches:
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PALENT NO. 6673910

GENERAL IMFORMATION:
APPLICANT: GARY L. Breton et al.
APPLICANT: GARY L. Breton et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO MORAXELLA CATAF
TITLE OF INVENTION: FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 2709.2005-001
CURRENT APPLICATION NUMBER: US/09/540,236
CURRENT FILING DATE: 2000-04-04
NUMBER OF SEQ ID NOS: 3840
SEQ ID NO 806
SEQ ID NO 806
SEQ ID NOS: 3840
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                                     ValGlyGlnLeuLysLysProPheIleProIleHisHisMetGluAlaHisAlaLeuThr 154
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                                                                                 ACCAAAGGCCCCGGGCTGATTGGGGCATTGATGACAGGGGCATTATTTTGGGCGGACGCTG
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                                                                                            Sequence 801, Application US/09252991A
Patent No. 6551795
GENERAL INFORMATION:
APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: AUCLEIC ACID AMINO ACID SEQUENCES RELATING TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR FILING DATE: 1998-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR PILING DATE: 1998-02-18
PRIOR PILING DATE: 1998-07-27
PRIOR FILING DATE: 1998-07-27
PRIOR FILING DATE: 1998-07-27
                                                          SEQ ID NO 801
                                                                                 NUMBER OF SEQ
ORGANISM: Pseudomonas aeruginosa
                  LENGTH: 1206
TYPE: DNA
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                                     GCCCTGGCGTTCCAGACCGCGGTGGTCGAGACCCTGCTGATCAAGTGCCGTCGCGCCTTG
                                                                      AlaAlaThrValGlnHisThrMetAlaCysHisLeuValLysArgThrHisArgAlaIle 305
                                                                                                          CAGCGTTGCGTCGAGGCCGGCGACGACGAGCAGCAG-----ACCCGCTGCGACATC
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; LENGTH: 1059
; TYPE: DNA
; ORGANISM: Pseudomonas a
US-09-252-991A-884
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US-09-252-991A-884/c
; Sequence 884, Application
; Patent No. 6551795
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CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-02-18
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
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 GCCTGCTGGCCGACGCTGTTCAGTCAGACCTCCATCGCGTCTACGGCGCGTC
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                                                           GGCCTGGTCGGCGCCTGCTGGTGGGGGCTTCCTGTGCCCAGGCGATGGCCTTCGCCTGG
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TITLE OF INVENTION: NUCLEIC ACID AND AMINO AC
TITLE OF INVENTION: DIAGNOSTICS AND THERAPEU
FILE REFERENCE: 2709-1002-001
CURRENT APPLICATION NUMBER: US/09/543,681A
CURRENT FILING DATE: 2000-04-05
PRIOR APPLICATION NUMBER: US 60/128,706
PRIOR PILING DATE: 1999-04-09
NUMBER OF SEQ ID NOS: 8344
SEQ ID NO 2341
LENGTH: 1074
   Pred. No.:
Score:
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US-09-543-681A-2341
                              Alignment Scores:
                                                             ; ORGANISM: Proteus
US-09-543-681A-2341
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                                                                                            TYPE: DNA
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ThrAspAsnGlyIleMetIleAlaTrpAsnGlyIleGluArgLeuArgAlaGlyLeu---
                                              ATGGCGATGATAATGGAACAACTCGGAGGGGAAGTGTTTTATGCTCGCCCTGAGTTATGT
                                                                                                      AspIleLysProProLeuHisHisAlaLysAsnCysAspPheSerPheThrGlyLeuGln 257
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                                                                          LeuGluIleLeuThrAsnAlaThrGlnCysThrLeuLeuCysProProProArgLeuCys
                                                                                                                                                                                              ValLysArgThrHisArgAlaIleLeuPheCysLysGlnArgAspLeuLeuProGlnAsn
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APPLICANT: Goldman, Barry S.
APPLICANT: Hinkle, Gregory J.
APPLICANT: Slater, Steven C.
APPLICANT: Slater, Steven C.
APPLICANT: Wiegand, Roger C.
FILE OF INVENTION: Myxococcus xanthus Genome Sectific Reference: 38-10(15849)B
CURRENT APPLICATION UMMBER: US/09/902,540
CURRENT FILING DATE: 2001-07-10
PRIOR APPLICATION NUMBER: 60/217,883
PRIOR FILING DATE: 2000-07-10
NUMBER OF SEQ ID NOS: 16825
SEQ ID NO 6612
LENGTH: 996
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Best Local Similarity:
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Patent No. 6833447
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                      ProGlyAspMetLeuAspLysValAlaArgArgLeuSerLeuIleLysHisProGluCys
                                                                                          LeuAlaLeuValGlnGlyValSerAspPheLeuLeuLeuGlyLysSerLeuAspIleAla
                                                                                                                           ThrAsnLysVal---GluPheProPheLeuValLeuIleSerGlyGlyHisCysLeu
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US-09-902-540-503/c
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Best Local Similarity:
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APPLICANT: Hinkle, Gregory J.
APPLICANT: Slater, Steven C.
APPLICANT: Wiegand, Roger C.
TITLE OF INVENTION: Myxococcus xanthus Genon
FILE REFERENCE: 38-10(15849)B
CURRENT APPLICATION NUMBER: US/09/902,540
CURRENT FILING DATE: 2001-07-10
PRIOR APPLICATION NUMBER: 60/217,883
PRIOR FILING DATE: 2000-07-10
                                                                                                                                                                                    Alignment Scores:
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                                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS: 16825
SEQ ID NO 503
LENGTH: 2582
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                 TYPE: DNA
ORGANISM: Myxococcus
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Conservative:
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1345 GCGCTGACGCGGGCGAACAAGACGCTCGACGTGGACCTCATCGCCGTCACGTCCGGC 128
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                                                                                                                                                                                                                                  GTGCGGCTGTGCACGGACAATGGCGCCATGATTGCGGTGGCGGGGTATGAGGCGTACCGC
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                                                                                                                                                                                                                                                               ProArgLeuCysThrAspAsnGlyIleMetIleAlaTrpAsnGlyIleGluArgLeuArg
                                                                                                                                                                                                                                                                                                                          CTGCGGGCACTGTGTCAGGCGCGAGCCGAGGAGCGGGGGTTGAACATGTTCCTGCCCCCG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTCTACGAGGTGCAGGCCTACGGGCAGTACCGGCTGGTGGTGGCAGCACGCGCGACGACGCG
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; FEATURE:
; NAME/KEY:
; LOCATION:
US-08-087-797-1
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DB:
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Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-649-273-2 (1-414) x US-08-087-797-1 (1-1315)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: 704 334 2014
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 1315 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/087,797 FILLING DATE: 14-JUL-1993 CLASSIFICATION: 435
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APPLICANT: Lo, Reggie Y.C.
APPLICANT: Abdullah, Khalid M.
TITLE OF INVENTION: Pasteurella Haemolytica
TITLE OF INVENTION: Glycoprotease
TITLE OF INVENTION: Gene and the Purified Er
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: 3374-80
TELECOMMUNICATION INFORMATION:
TELEPHONE: 704 377 1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
NAME: Layton, Jr., Samuel G.
REGISTRATION NUMBER: 22807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             No.:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRANDEDNESS:
TOPOLOGY: lin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
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STREET: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: nucleic acid
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296 CCGTAAAACGTTGCCACTAATTCAAGAAGCCTTAAAAGAGGCCAATCTGCAACCCTCGGA
                                                                                                                                                                                   176
                                                                                                                                                                                                                                                                             134 TCC-----AACTATGCGAATTTTAGGTATTGAAACCTCTTGTGATGA
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No. 5543312th Carolina
                       gGluAsnIleGlnArgIleValGlnGluAlaLeuSerAlaSerGlyValSerProSerAs 108
                                                                                            nThrGluValHisLeuLysThrGlyGlyIleValProProAlaAlaGlnGlnLeuHisAr 88
                                                                                                                                                                                     AACCGGTGTTGCCATTTATGATGAAGACAAAGGCTTAGTGGCAAACCAGCTTTATAGCCA
                                                                                                                                                                                                                                                                                                  HisProGlyThrLeuPheLeuHisLysIle-ValLeuGlyIleGluThrSerCysAspAs
                                                                                                                                                                                                                                                                                                                                                                       GGGGCGTTCTTCGCCCCT------TTTGGTTTTCTAACTTATTTTGACTTC 133
                                                                                                                                                                                                                                                                                                                                                                                              GlyValPhePheLysProSerLysArgLysValTyrGluPheLeuArgSerPheAsnPhe 28
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1211 East Morehead Street,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            United States
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34.97%
22.54%
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Matches:
Conservative:
Mismatches:
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RESULT 13 US-08-087-797-1

Sequence 1, Application US/08087797 Patent No. 5543312 GENERAL INFORMATION:

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CGCGGCCTG AlaGlyLeu 375

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802 293 853 273 901 253

GTGCCGCAGGGGCAGGCGCTG-----

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476 148 416 356 108

128

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RESULT 14
US-09-557-884-1/c
; Sequence 1, Application US/09557884
; Patent No. 6506881
; GENERAL INFORMATION:
; APPLICANT: Fleischmann et al.
TITLE OF INVENTION: The Nucleotide sequence of the Haemophilus influenzae!
Thereof, and Uses Thereof
                                                   CORRESPONDENCE ADDRESS:
ADDRESSEE: Human Genome Sciences,
STREET: 9410 Key West Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AACCATTGCCCGTTCGCTGATTATGCTTGGAATGTTCCGGCATTGGGCGTTCACCATAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGA CTGGATTTCAGTTTCTCCGGTTTAAAAAACCTTTGCTGCGAATACGATTAAAGCCAA
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                  CITY: Rockville
STATE: MD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      lAlaSerAsnPheTyrIleArgArgAlaLeuGluIleLeuThrAsnAlaThrGlnCysTh
COUNTRY: USA
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DB:
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Best Local Similarity:
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INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 08/476,102
FILING DATE: JUN-5-1995
ATTORNEY/AGENT INFORMATION:
NAME: Michelle S. Marks
REGISTRATION NUMBER: 41,971
REFERENCE/DOCKET NUMBER: PB186P3
TELECOMMUNICATION INFORMATION:
TELECHONE: 301-309-8504
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COMPUTER READABLE FORM:
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                                                                                                                                                                                                                                                                                                                                             119
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                                                             GTGCGTGTCGATGGTAGGAAAATATGAAGTGATAGGAGAATCTATTGATGATGCTGCT
                                                                                                                                       ValProProAlaAlaGlnGlnLeuHisArgGluAsnIleGlnArgIleValGlnGluAla 98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AsnValLeuGlyGluAlaIleHisSerGlnThrGluValHisLeuLysThrGlyGlyIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 1830121 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDIUM TYPE: 3 1/2 inch diskette
COMPUTER: Dell Pentium
OPERATING SYSTEM: MS DOS v6.22
SOPTWARE: ASCII Text
                                                                                                                                                                                                                        AATGTTCCTGCGATTGGTGTTCATCATATGGAAGGGCATTTACTTGCGCCAATGCTTGAT 552849
                                                                                                                                                                                                                                                                                                                                       GlyLeuAlaLeuSerLeuGlyValGlyLeuSerPheSerLeuGlnLeuValGlyGlnLeu
                                                                                                                                                                                                                                                                                                                                                                                                                       LeuSerAlaSerGlyValSerProSerAspLeuSerAlaIleAlaThrThrIleLysPro 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTTCCTGAATTAGCATCACGTGATCATATTCGGAAAACAGCACCTCTTATTAAAGCGGCA
                                                                                                                                                                                                                                              LysLysProPheIleProIleHisHisMetGluAlaHisAlaLeuThrIleArgLeu---
                                                                                                                                                                                                                                                                                                      GGGCTTGTTGGCGCATTGCTTGTCGGTGCTACGATTGCACGTTCTTTAGCCTATGCTTGG
                                                                                                                                                                                                                                                                                                                                                                                  TTAGAGGAAGCCAATTTAACCGCGAGCGATATTGATGGTATTGCTTATACGAGTGGCCCT
                                                                                    AlaLeuValGlnGlyValSerAspPheLeuLeuLeuGlyLysSerLeuAspIleAlaPro
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Matches:
Conservative:
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Indels:
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COMPUTER READABLE FORM:
MEDIUM TYPE: 3 1/2 inch diskette
COMPUTER: Dell Pentium
OPERATING SYSTEM: MS DOS v6.22
SOFTWARE: ASCII Text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/643,990A
FILLING DATE: 23-Aug-2000
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          552464 ACTCTTGCC-------ATTAAATGTAAG---CGTGCATTGAAAGAA 552429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGTACAGATAATGGTGCGATGATTGCTTACACAGGTTTTTTACGTTTAAAACAAGGT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CysThrAspAsnGlyIleMetIleAlaTrpAsnGlyIleGluArgLeuArgAlaGly 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AlaLeuGluIleLeuThrAsnAlaThrGlnCysThrLeuLeuCysProProProArgLeu
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GlnAsnAsnAlaValLeuValAlaSerGlyGlyValAlaSerAsnPheTyrIleArgArg
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACATTTCCACGTCCAATGACAGATCGTGCAGGCCTTGATTTTAGTTTTTCTGGTTTAAAA 552570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HisLeuValLysArgThrHisArgAlaIleLeuPheCysLysGlnArgAspLeuLeuPro
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AspIleLysProProLeuHisHisAlaLysAsnCysAspPheSerPheThrGlyLeuGln
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INVENTION: The Nucleotide sequence of
the Haemophilus influenzae Rd Genome,
Thereof, and Uses Thereof
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Best Local Similarity:
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SEQUENCE CHARACTERISTICS:
LENGTH: 1830121 base
TYPE: nucleic acid
STRANDEDNESS: double
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552509
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                            GlyGlnIleLeuSerSerAlaAlaAspIleAlaAlaThrValGlnHisThrMetAlaCys 295
                                                                                       ACATTTGCCGCAAATACAGTTAATCAAGCAATTAAAAAACGAGGGGGGAACTGATAGAGGCAA
                                                                                                                 HisValThrAspLysIleIleMetLysLysGluLysGluGluGly-----IleGluLys 275
                                                                                                                                                                                                         AspIleLysProProLeuHisHisAlaLysAsnCysAspPheSerPheThrGlyLeuGln 257
                                                                                                                                                                                                                                                                                                                                                                   GGCGAAGCCTTTGATAAAACAGCAAAATTACTTGGACTA----GATTATCCA------
                                                                                                                                                                                                                                                                                                                                                                                                           GlyAspMetLeuAspLysValAlaArgArgLeuSerLeuIleLysHisProGluCysSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTGCGTGTCGATGGTAGGAAAATATGAAGTGATAGGAGAATCTATTGATGATGCTGCT 552729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AlaLeuValGlnGlyValSerAspPheLeuLeuGlyLysSerLeuAspIleAlaPro 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ThrAsnLysValGluPheProPheLeuValLeuLeuIleSerGlyGlyHisCysLeuLeu 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AATGTTCCTGCGATTGGTGTTCATCATATGGAAGGGCATTTACTTGCGCCAATGCTTGAT 552849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LysLysProPheIleProIleHisHisMetGluAlaHisAlaLeuThrIleArgLeu--- 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGCTTGTTGGCGATTGCTTGTCGGTGCTACGATTGCACGTTCTTTAGCCTATGCTTGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ValLeuGlyIleGluThrSerCysAspAspThrAlaAlaAlaValValAspGluThrGly 58
                                                                                                                                                                                 ACATTTCCACGTCCAATGACAGATCGTGCAGGCCTTGATTTTAGTTTTTCTGGTTTAAAA
                                                                                                                                                                                                                                                                                                                   ThrMetSerGlyGlyLysAlaIleGluHisLeuAlaLysGlnGlyAsnArgPheHisPhe 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GlyLeuAlaLeuSerLeuGlyValGlyLeuSerPheSerLeuGlnLeuValGlyGlnLeu
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ValProProAlaAlaGlnGlnLeuHisArgGluAsnIleGlnArgIleValGlnGluAla 98
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TELEFAX: 310-309-8439
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RESULT 15 US-09-643-990A-1/c

Sequence 1, Application US/09643990A Patent No. 6528289
GENERAL INFORMATION:

APPLICANT: Robert D. Fleischmann

Adams

Hamilton O. Smith Owen White Mark D.

CORRESPONDENCE ADDRESS:
ADDRESSEE: Human Genome Sciences,
STREET: 9410 Key West Avenue

STATE: MD CITY: Rockville,

ZIP: COUNTRY: USA

20850

NUMBER OF SEQUENCES:

TITLE OF

PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/487,429
PILING DATE: 1995-06-07
APPLICATION NUMBER: 08/426,787
PILING DATE: 1995-04-21
ATTORNEY/AGENT INFORMATION:

NAME: Kenley K. Hoover REGISTRATION NUMBER: 40

REFERENCE/DOCKET NUMBER: PB186P1C1

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Seatoh completed. November 11 2005 02.47.48	552308 TGTACAGATAATGGTGCGATGATTGCTTACACAGGTTTTTTACGTTTAAAACAAGGT 552252	CysThrAspAsnGlyIleMetIleAlaTrpAsnGlyIleGluArgLeuArgAlaGly 374	552368 ACGCTTGCGCACTTAATGCAAAATTTAGGTGGCGAAGTGTTTTATCCTCAACCTCAACTTT 552309	336 AlaLeuGluIleLeuThrAsnAlaThrGlnCysThrLeuLeuCysProProProArgLeu 355	552428 ACAGGCTATAAACGTTTAGTGATTGCGGGAGGGGGTGAGCGCAAATAAAAAACTCCGAGAA 552369	GlnAsnAsnAlaValLeuValAlaSerGlyValAlaSerAsnPheTyrIleArgArg 335	552464 ACTCTTGCCATTAAATGTAAGCGTGCATTGAAAGAA 552429	296 HisLeuValLysArgThrHisArgAlaIleLeuPheCysLysGlnArgAspLeuLeuPro 315

Search completed: November 11, 2005, 02:47:48 Job time : 1671.85 secs

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Command line parameters:

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-MODEL=frame+_p2n.mode1 -DEV=xlp
-Q=/cgn2_1/USPTO_spool_p/US10649273/runat_02112005_091642_16935/app_query.fasta_1.583
-DE=Published Applications_NA _QFWT=fastap -SUFFIX=oligp2n.rnpb -MINMATCH=0.1
-LOOPCL=0 -LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=oligo
-TRANS=human40.cdi -LIST=45 -DOCALIGN=200 -THR_SCORE=quality -THR_MIN=274
-ALIGN=15 -MODELICALAL -OUTFWT=pto -NORM-ext -HERBSIZE=500 -MINLEN=0
-MAXLEN=2000000000 -USER=US10649273_@CGN 1 1_723_@runat_02112005_091642_16935
-NCPU=6 -ICPU=3 -NO MMAP -LARGEQUERY -NEG SCORES=0 -WAIT -DSPBLOCK=100
-LONGLOG -DEV TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=60 -XGAPEXT=60
-FGAPOP=6 -FGAPEXT=7 -XGAPOP=60 -YGAPEXT=60 -DELDP=6 -DELEXT=7
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Ygapop 60.0 , Ygapext 60.0
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| Ggn2_6/ptodata/1/pubpna/US07_PUBCOMB.seq:*
| Ggn2_6/ptodata/1/pubpna/US06_NEW_PUB.seq:*
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| Ggn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*
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| Ggn2_6/ptodata/1/pubpna/US09S_PUBCOMB.seq:*
| Ggn2_6/ptodata/1/pubpna/US09S_PUBCOMB.seq:*
| Ggn2_6/ptodata/1/pubpna/US09S_PUBCOMB.seq:*
| Ggn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
| Ggn2_6/ptodata/1/pubpna/US10A_PUBCOMB.seq:*
| Ggn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
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2666.437 Million cell updates/sec
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61 LeuGlyGluAlaIleHisSerGlnThrGluValHisLeuLysThrGlyGlyIleValPro

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81 ProAlaAlaGlnGlnLeuHisArgGluAsnIleGlnArgIleValGlnGluAlaLeuSer

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291 GAATTTTTAAGAAGTTTTAATTTTCATCCTGGAACACTATTTCTTCATAAAATAGTATTG

41 GlyIleGluThrSerCy8AspAspThrAlaAlaAlaValValAspGluThrGlyAsnVal

GAATTGAAACTAGTTGTGATGATACAGCAGCTGCTGTTGGTGATGAAACTGGAAATGTG

US-10-649-273-2 (1-414) x US-10-067-443-1 (1-2197)

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Alignment Scores: Pred. No.: Score: Percent Similarity: Best Local Similarity: Query Match: DB:	RESULT 1 US-10-067-443-1 Sequence 1, A Publication N GENERAL INFOR APPLICANT: B ITITLE OF INV FILE REFEREN CURRENT APPLIC PRIOR APPLIC PRIOR APPLIC PRIOR FILING	o p a s b	Result No.
No.:  No.:  It Similarit  Ocal Simila  Match:	SULT 1 -10-067-443-1 -10-067-443-1 -10-067-443-1 -10-067-443-1 -10-067-443-1 -10-067-443-1 -10-067-443-1 -10-067-443-1 -10-067-443-1 -10-067-443-1 -10-067-443-1 -10-067-443-1	3414 3414 340	Score
s: ity: larity:	7-443-1 1c1 Application US/100674 1c1 Application US/100674 1c1 INFORMATION: C INFORMATION: C INVENTION: POLYMUCLEOTI OP INVENTION: SPINAL CORD REFERENCE: DO073 NP UT APPLICATION NUMBER: US/1 UT FILING DATE: 2002-02-05 APPLICATION NUMBER: US 60/ FILING DATE: 2001-02-05 APPLICATION NUMBER: US 60/ FILING DATE: 2001-04-10 REFIED TO NOS: 71 SARE: Patentin version 3.0 NO 1 H: 2197 LDNA UISM: Homo sapiens FIEN: CDS INS(231)(1472)	100.0 100.0 100.0 100.0 82.1	t ch
0 414.00 100.00\$ 100.00\$ 100.00\$	ication US/ US200300827 ICON: POLYNU ICON: POLYNU ICON: SPINA DO073 NP FION NUMBER: 2002 DN NUMBER: FE: 2001-04 D NOS: 71 CIN Version Bapiens	2197 2197 2197 2197 2572 1416	Length
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Length: Matches: Conservative: Mismatches: Indels: Gaps:	ELIGNMENTS  ENCODING  MP-1  067,443  6,518  2,814	US-10-067-443-1 US-10-649-273-1 US-10-651-722-1 US-10-480-988-36 US-10-120-988-177	D
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RESULT 2
US-10-649-273-1
Sequence 1, Application US/10649273
Publication No. US20040043407A1
GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
APPLICANT: Bristol-Myers Squibb Company
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                                                                                      GlyGluAlaSerIleLysValProGlnLeuLysMetGluIle
                                                                                                                                 ThrHisArgAlaIleLeuPheCysLysGlnArgAspLeuLeuProGlnAsnAsnAlaVal
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; NAME/KEY: CDS
; LOCATION: (231)...(
US-10-649-273-1
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; CURRENT APPLICATION NUMBER: US/10/649,273
; CURRENT FILING DATE: 2003-08-27
; PRIOR APPLICATION NUMBER: US 60/266,518
; PRIOR PILING DATE: 2001-02-05
; PRIOR APPLICATION NUMBER: US 10/067,443
; PRIOR APPLICATION NUMBER: US 60/282,814
; PRIOR APPLICATION NUMBER: US 60/282,814
; PRIOR APPLICATION NUMBER: US 60/282,814
; PRIOR PILING DATE: 2001-04-10
; NUMBER OF SEQ ID NOS: 71
; SOFTWARE: PATENTIN VETSION 3.2
; SEQ ID NO 1
; LENGTH: 2197
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Alignment Scores:  Fred. No.:  414.00  Matches:  Percent Similarity:  100.00%  Conservative:  Best Local Similarity:  100.00%  Mismatches:  Mismatches:  0	; CRGANISM: Homo sapiens ; FEATURE: ; NAME/KEY: CDS ; LOCATION: (231)(1472) US-10-651-722-1	; NUMBER OF SEQ ID NOS: 71 ; SOFTWARE: PatentIn version 3.2 ; SEQ ID NO 1 ; LENGTH: 2197 ; TYPE: DNA		CURRENT APPLICATION NUMBER: US/10/651,722 CURRENT FILING DATE: 2003-08-29 PRIOR APPLICATION NUMBER: US 60/266,518 PRIOR FILING DATE: 2001-02-05	US-10-651-722-1 US-10-651-722-1 Sequence 1, Application US/10651722 Sequence 1, Application US/10651722 ; Publication No. US20040048302A1 ; GENERAL INFORMATION: ; APPLICANT: Bristol-Myers Squibb Company ; APPLICANT: Bristol-Myers Squibb Company ; TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE, MP-1 ; FILE REFERENCE.	Qy 401 GlyGluAlaSerIleLysValProGlnLeuLysMetGluIle 414	Qy 381 IleGluGlyIleArgTyrGluProLysCysProLeuGlyValAspIleSerLysGluVal 400	Qy 361 IleMetIleAlaTrpAsnGlyIleGluArgLeuArgAlaGlyLeuGlyIleLeuHisAsp 380	Qy 341 ThrAsnAlaThrGlnCysThrLeuLeuCysProProArgLeuCysThrAspAsnGly 360	Qy 321 LeuValAlaSerGlyClyValAlaSerAsnPheTyrIleArgArgAlaLeuGluIleLeu 340 	Oy 301 ThrHisArgAlaIleLeuPheCysLysGlnArgAspLeuLeuProGlnAsnAsnAlaVal 320	Oy 281 SerAlaAlaAspIleAlaAlaThrValGlnHisThrMetAlaCysHisLeuValLysArg 300	Qy 261 AspLys1leIleMetLysLysGluLysGluGlyIleGluLysGlyGlnIleLeuSer 280	Qy 241 ProProLeuHisHisAlaLysAsnCysAspPheSerPheThrGlyLeuGlnHisValThr 260	Qy 221 GlyGlyLysAlaIleGluHisLeuAlaLysGlnGlyAsnArgPheHisPheAspIleLys 240 . 
B & 8	B & B	Q D Q	Db Qy	p Q	B Q B 4	) pg Q	Db Qy	B 8	gg Qy	g Q	B 8	B 8	В <i>Q</i>	Db Qy	Query M DB: US-10-6
LeuvaiAiaSerGiyGiyvaiAiaSerAsnPheTyriieArgArgAiaLeuGiulieLeu 340 	71 TCAGCAGCAGACATTGCTGCCACAGTACAGCACACAATGGCATGTCATCTTGTGAAAAAG 01 ThrHisArgAlaIleLeuPheCysLysGlnArgAspLeuLeuProGlnAsnAsnAlaVa	Eysk Daggar	ProProLeuHisHisAlaLysAsnCysAspPheSerPheThrGlyLeuGlnHisValThr 2	221 GlyGlyLysAlaIleGluHisLeuAlaLysGlnGlyAsnArgPheHisPheAspIleLys 240 	201 LeuaspLysVallalland	ValGluPheProPheLeuValLeuLeuIleSerGlyGlyHisCysLeuLeuAlaLeuVal 18	141 ProPheIleProIleHisHisMetGluAlaHisAlaLeuThrIleArgLeuThrAsnLys 160 	121 AlaLeuSerLeuGlyValGlyLeuSerPheSerLeuGlnLeuValGlyGlnLeuLysLys 140 	101 AlaSerGlyValSerProSerAspLeuSerAlaTleAlaThrThrIleLysProGlyLeu 120 	81 ProAlaAlaGlnGlnLeuHisArgGluAsnIleGlnArgIleValGlnGluAlaLeuSer 100 	61 LeuGlyGluAlaIleHisSerGlnThrGluValHisLeuLysThrGlyGlyIleValPro 80 	41 GlyIleGluThrSerCYsAspAspThrAlaAlaAlaValAspGluThrGlyAsnVal 60 	21 GlupheLeuArgSerPheAsnPhcHisDroGlyThrLeuPheLeuHisLysIleValLeu 40	1 MetLeuIleLeuThrLysThrAlaGlyValPhePheLysProSerLysArgLysValTyr 20 	Match: 100.00% Indels: 0 19 Gaps: 0 -649-273-2 (1-414) x US-10-651-722-1 (1-2197)

Alignment Scores: Spred. No.: 0 Length: 2572	; NAME/KEY: misc_feature ; OTHER INFORMATION: Incyte ID No: 7632424CB1 US-10-480-988-36	TYPE: DNA ORGANISM: Homo FEATURE:	NUMBER OF SEQ ID NO SOFTWARE: PERL Prog SEQ ID NO 36	PRIOR FILING DATE: 2001-08-29 PRIOR APPLICATION NUMBER: US PRIOR FILING DATE: 2002-05-03	; PRIOR APPLICATION NUMBER: US 60/314,821 ; PRIOR FILING DATE: 2001-08-24 · PRIOR APPLICATION NUMBER: US 60/315.992	PRIOR PRIOR		; PRIOR APPLICATION NUMBER: PCT/US02/19360 ; PRIOR FILING DATE: 2002-06-18 ; PRIOR APPLICATION NUMBER: US 60/300,508	; TITLE OF INVENTION: PROTEIN MODIFICATION AND MAINTENANCE MODECOMES; FILE REFERENCE: PF-1040 USN ; CURRENT APPLICATION NUMBER: US/10/480,988 · CURRENT ATTITUG DATE: 2003-12-16	APPLICANT: SUBJECT: VICKI S.; LOO, MEL!; APPLICANT: SPRAGUE, William W.; TANG, Y. TOM; APPLICANT: LU, Yan; ZEBARUADIAN, Yeganeh FRIET COT. TREETE COT.	; APPLICANT: LEE, Sally; BECHA, Shanya D.; ; APPLICANT: LEE, Soo Yeun; TRAN, Uyen K.; and the strong vict control were.	; APPLICANT: GLETZEN, NIMDETLY J.; DINY, LI; ; APPLICANT: BAUGHN, Mariah R.; BOROWSKY, Mark L.; ; APPLICANT: YAO, Monique G.; CHAWLA, Narinder K.; ; APPLICANT: MASON, Patricia M.; GURURAJAN, Rajagopal;	; APPLICANT: YUK, Henry; FUKSYIHK, IAN J.; ; APPLICANT: BARROSO, Ines, RAMKUMAR, Jayalaxmi; ; APPLICANT: GRIFFIN, Jennifer A.; LI, Joana X.; ; APPLICANT: YANG, Junming; THANGAVELU, Kavitha; ; APPLICANT: YANG, Junming; THANGAVELU, Kavitha;	; APPLICANT: TRAN, Bao; DUGGAN, Brendan M.; ; APPLICANT: WARREN, Bridget A.; ISON, Craig H.; ; APPLICANT: HONCHELL, Cynthia D.; NGUYEN, Danniel B.; ; APPLICANT: LU, Dyung Aina M.; LEE, Ernestine A.;		RESULT 4 US-10-480-988-36 ; Sequence 36, Application US/10480988	Qy 401 GlyGluAlaSerIleLysValProGlnLeuLysMetGluIle 414	Qy 381 IleGluGlyIleArgTyrGluProLysCysProLeuGlyValAspIleSerLysGluVal 400		Oy 341 ThrAsnAlaThrGlnCysThrLeuLeuCysProProArgLeuCysThrAspAsnGly 360
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Qy 135 Va.	Qy 115 Th	Qy 95 Vai       Db 343 GT/	Qy 75 Th	US-10-649-273-2	Alignment Scores: Pred. No.: Score: Percent Similarity: Best Local Similarity: Query Match: DB:	Qy 361 IleMel Db 1224 ATTATY Qy 381 IleGl1 Db 1284 ATAGAY Qy 401 GlYGl1 Db 1344 GGAGAY RESULT 5 US-10-120-988-177 Sequence 177, App) Publication No. Ut GENERAL INFORMATIO APPLICANT: Tang, APPLICANT: Tang, APPLICANT: Good, APPLICANT: Wang APPLICANT: Wang APPLICANT: Drman TITLE OF INVENTIO, TITLE DIAGNAME: Pt-10, SEQ ID NO 177 SECON 177	Db 1104 CTV  Oy 341 Th	=
G yG nLeuLysLysPrc              GGACAGTTAAAAAAGCCA	CIleLysProGlyLeuAla 	GlnGluAlaLeuSerAla 	rGlyGlyIleValProPro 	(1-414) x US-10-120-9	: 0 340.00 100.00\$ 100.00\$ 82.13\$	Qy  361 IleMetileAlaTrpAsnGlyTleGluAr Db 1224 ATTATGATTGATTGAATGTTTGAAAG Qy 381 IleGluGlyIleArgTyrGluProLysCy [	GTTGCATCTGGTGGTGTT  CASTALaThrGlnCysTh	
DPhelleProlleHisHisM 	ALeuSerLeuGlyValGlyL 	SerGlyValSerProSerA 	AlaAlaGlnGlnLeuHisA 	)-988-177 (1-1416)	Length: Matches: Conservative: Mismatches: Indels: Gaps:	IleMetileAlaTrpAssnGlyIleGluArgLeuArgAlaGlyI 	CTGGTTGCATCTGGTGGTGCGCAAGTAACTTCTATATCCGCAGAGCTCTGGAA CTGGTTGCATCTGGTGGTGTCGCAAGTAACTTCTATATCCGCAGAGCTCTGGAA ThrànalaThrGlnCysfhrLeuLeuCysFroProProArgLeuCysfhrAs	
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                                                                                       ProGlnAsnAsnAlaValLeuValAlaSerGlyGlyValAlaSerAsnPheTyrIleArg
                                                                                                            LysGlyGlnIleLeuSerSerAlaAlaAspIleAlaAlaThrValGlnHisThrMetAla 294
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                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention describes an isolated nucleic acid molecule (I) encoding a CC metalloprotease (MP-1). (I) is useful for preventing, treating, or ameliorating a medical condition, particularly an immune disorder, an CC ambrivating a medical condition, particularly an immune disorder, an CC amyotrophic lateral sclerosis (ALS), its juvenile form or an ALS-like condition. The compositions and methods are also useful for disgnosing, prognosticating, treating, ameliorating and/or treating disorders (associated with MP-1 activity, e.g. diabetes, cancer, reproductive colsporders (e.g. Kleinfelter's syndrome, genital warts, or germinal cell aplasia), metabolic disorders (e.g. premature puberty, Kallman syndrome, CC or Cushing's syndrome), neurodegenerative diseases (Alzheimer's disease, Huntington's disease or Tourette syndrome), liver and renal disease, Huntington's disease or Tourette syndrome), liver and renal disease, pulmonary diseases (e.g. premmonia, emphysema or cystic (fibrosis) and vascular, inflammatory and neurological disorders (e.g. Alzheimer's disease or Parkinson's disease). This is the amino acid corrections of a metalloprotease MPI protein
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                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 414 AA;
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10-APR-2001; 2001US-0282814P.
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                                                                                         QGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKQGNRFHFDIK
                                                                                                                                                                                                                                                                                              MLILTKTAGVFFKPSKRKVYEFLRSFNFHPGTLFLHKIVLGIETSCDDTAAAVVDETGNV
PPLHHAKNCDFSFTGLQHVTDKI IMKKEKEEGIEKGQILSSAADIAATVQHTMACHLVKR
                  PPLHHAKNCDFSFTGLQHVTDKI IMKKEKEEGI EKGQI LSSAAD I AATVQHTMACHLVKR
                                                                        QGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKQGNRFHFDIK
                                                                                                                                                ALSIGVGLSFSLQLVGQLKKPFIPIHHMEAHALTIRLTNKVEFPFLVLLISGGHCLLALV
                                                                                                                                                                 ALSLGVGLSFSLQLVGQLKKFFIFIHHMEAHALTIRLTNKVEFFFFLVLLISGGHCLLALV
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100.0%; Pred. No. 0;
Live 0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                    O-sialogycoproteinase-like for diagnosing, preventing
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QGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKQGNRFHFDIK
                                                     ALSLGVGLSFSLQLVGQLKKPFIPIHHMEAHALTIRLTNKVEFPFLVLLISGGHCLLALV
                                                                                        LGEAIHSQTEVHLKTGGIVPPAAQQLHRENIQRIVQEALSASGVSPSDLSAIATTIKPGL
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Pred. No. 0;
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06-JUI-2001; 2001US-0303445P.
13-JUI-2001; 2001US-0305405P.
09-AUG-2001; 2001US-0311442P.
24-AUG-2001; 2001US-0314821P.
29-AUG-2001; 2001US-0315992P.
03-MAY-2002; 2002US-0378205P.
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Walia NK,
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Elliott
                                                                                                                                                                                                                                                               New isolated human PMOD polypeptide and polynucleotide, useful diagnosing, treating and preventing diseases or conditions assometh the aberrant PMOD expression, e.g. cancer, AIDS, atheroscient the aberrant PMOD expression, e.g. cancer, and atheroscient the aberrant PMOD expression the aberrant th
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Ison CH, Honche
J, Barroso I, Ra
K, Gietzen KJ,
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ML, Yao MG;
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The invention relates to an isolated polypeptide comprising: any of 28 sequences of 48-1256 amino acids; a natural amino acid sequence at least 90% identical to the 28 amino acid sequences, 94% identical to a sequence.

Claim 63;

Page

182-183; 225pp; English.

atherosclerosis associated

and

CC of 703 or 267 amino acids, 96% identical to a sequence of 414 amino CC acids, or 97% identical to a sequence of 242 amino acids, all given in CC the isolated polypeptide. The polypeptides and polynucleotides are useful CC in diagnosing, treating and preventing diseases or conditions associated CC with the decreased expression of protein modification and maintenance CC molecules (PMOD), such as cell proliferative diseases (e.g. AIDS, CC altergose), neurological disorders (e.g. stroke, Parkinson's disease, CC endometriossis), developmental, vesicle trafficking disorders, and CC infections (e.g. bacterial, viral, parasitic, protozoal). These are also CC useful in assessing the effects of exogenous compounds on the expression CC or antagonist of the polypeptides, or in altering the expression of the golymucleotide and compounds for effectiveness as agonist CC or massuring protein protein interactions, drug-carget interactions, and CC of the activity of the polypeptide. The microarray is useful in monitoring CC or measuring protein-protein interactions, drug-carget interactions, and CC of the invention

Sequence 414 AA;

ð ঠ ક 밁 5 밁 5 밁 S 멍 뮹 문 ঠ Query Match 100.0%; Score 414; DB Best Local Similarity 100.0%; Pred. No. 0; Matches 414; Conservative 0; Mismatches Query Match Best Local ( 361 301 301 181 121 241 241 181 121 61 19 μ. THRAILFCKQRDLLPQNNAVLVASGGVASNFYIRRALBILTNATQCTLLCPPPRLCTDNG 360 QGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKQGNRFHFDIK 240 ALSIGVGLSFSLQLVGQLKKPFIPIHHMEAHALTIRLTNKVEFPFLVLLISGGHCLLALV 180 LGEAIHSQTEVHLKTGGIVPPAAQQLHRENIQRIVQEALSASGVSPSDLSAIATTIKPGL IMIAWNGIERLRAGLGILHDIEGIRYEPKCPLGVDISKEVGEASIKVPQLKMEI 414 THRAILFCKQRDLLPQNNAVLVASGGVASNFYIRRALEILTNATQCTLLCPPPRLCTDNG ALSIGVGLSFSLQLVGQLKKPFIPIHHMEAHALTIRLTNKVEFPFLVLLISGGHCLLALV LGEAIHSQTEVHLKTGGIVPPAAQQLHRENIQRIVQEALSASGVSPSDLSAIATTIKPGL QGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKQGNRFHFDIK DB 6; Length 414; <u>.</u> Indels <u>,</u> Gaps 300 300 240 180 360 120 60 60

Search completed: November 11, Job time : 120 secs 03:18:08

361

GenCore version 5.1.6 Copyright (c) 1993 - 2005 Compugen Ltd.

OM protein - protein search, using sw model

Run on: November 11, 2005, 02:14:24 ; Search time 38 Seconds (without alignments) 1048.256 Million cell updates/sec

Title: Perfect score: US-10-649-273-2 414

1 MLILTKTAGVFFKPSKRKVY......DISKEVGEASIKVPQLKMEI 414

Scoring table: OLIGO Gapop 60.0 , Gapext 60.0

Searched: 283416 seqs, 96216763 residues

Word size :

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Total number of hits satisfying chosen parameters:

0

Database : Post-processing: Listing first 45 summaries PIR\_79:\*
1: pir1:\*
2: pir2:\*
3: pir3:\*
4: pir4:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No. Query Score Match Length DB ID

Description

No matches found

Search completed: November 11, 2005, 03:22:58 Job time : 38 secs

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RESULT 1
Q96EVQ9
ID Q96E
AC Q96E
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OS Homo
OC Euka
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
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Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.

EMBL; BC011904; AAH11904.1; -.

MEROPS; M22.004; -.

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GO; GO:0008270; F:Zhc ion binding; IEA.

GO; GO:0008270; F:Zhc ion binding; IEA.

GO; GO:0008270; F:Zhc ion binding; IEA.

InterPro; IPR001905; Peptidase M22.

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Pfam; PF00814; Peptidase M22; 1.

PIRSF; PIRSF004537; Osialg1c_pptds; 1.
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PRODOM; PD002367; Peptidase M22; 1.

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SEQUENCE 414 AA; 45122 MW; A536;
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                                                                   THRAILFCKQRDLLPQNNAVLVASGGVASNFYIRRALEILTNATQCTLLCPPPRLCTDNG
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                                                                                                                                   PPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQHTMACHLVKR
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A., Schein J.E.,
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Search completed: November 11, 2005, 03:22:09
Job time: 120 secs

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Result
No.
NUMBER OF SEQ ID NOS: 71
SOUTWARE: PatentIn version 3.0
SEQ ID WO 2
LENGTH: 414
TYPE: PRT
ORGANISM: Homo sapiens
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Maximum
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                                                                                                                                                                                                  GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED
TITLE OF INVENTION: SPINAL CORD, MP-1
FILE REFERENCS: D0073 NP
CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2002-05
                                                                                                                                                                                                                                                                                                                                                Sequence 2, Application US/10067443
Patent No. 6642041
                                                                                                                       PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
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Best Local Similarity 100.0%;
                                                                        361
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                                                            IMIAWNGIERLRAGLGILHDIEGIRYEPKCPLGVDISKEVGEASIKVPQLKMEI 414
                                                                                                                      THRAILFCKQRDLLPQNNAVLVASGGVASNFYIRRALEILTNATQCTLLCPPPRLCTDNG
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2005, 03:23:52
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Search completed: November 11, Job time : 43 secs

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Post-processing: Listing first 45 summaries
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Maximum DB seq length: 200000000
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Perfect score:
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                    Published Applications AA:*

1: /cgn2_6/ptodata/1/pubpaa/US07 PUBCOMB.pep:*

2: /cgn2_6/ptodata/1/pubpaa/US06 NEW PUB.pep:*

3: /cgn2_6/ptodata/1/pubpaa/US06 NEW PUB.pep:*

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Copyright (c) 1993 - 2005 Compuc
6/ptodata/1/pubpaa/US60_PUBCOMB.pep:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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4004	Result
414 414 414 414	Score
100.0	Query Match
444 4114 4144	Query Match Length DB ID
14 15 17	D8
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Sequence 2, Appli Sequence 2, Appli Sequence 2, Appli Sequence 8, Appli	Description
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RESULT 1
US-10-067-443-2
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Sequence 2. Application US/10649273

; Denication No. US20040043407A1

; GENERAL INFORMATION:

APPLICANT: Bristol-Myers Squibb Company

; TITLE OF INVENTION: POLYNUCLECTIDE ENCODING A NOVEL METALOPROTEASE, MP-1

FILE REFERENCE: D0073 CNT

; CURRENT APPLICATION NUMBER: US/10/649,273

; CURRENT APPLICATION NUMBER: US 60/266,518

; PRIOR APPLICATION NUMBER: US 60/266,518

; PRIOR APPLICATION NUMBER: US 10/067,443

; PRIOR APPLICATION NUMBER: US 10/067,443

; PRIOR APPLICATION NUMBER: US 10/067,443

; PRIOR APPLICATION NUMBER: US 50/282,814

; PRIOR APPLICATION NUMBER: US 60/282,814

; PRIOR APPLICATION NUMBER: US 60/282,814

; PRIOR PILING DATE: 2001-04-10

; NUMBER OF SEQ ID NOS: 71

; SOFTWARE: PatentIn version 3.2
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APPLICANT: Bristol-Myere Squibb Company
IITLE OF INVENTION: POLYNUCLECTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED
TITLE OF INVENTION: SPINAL CORD, MP-1
FILE REFERENCE: D0073 NP
CURRENT FILING DATE: 2002-02-05
CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR RILING DATE: 2001-02-05
PRIOR FILING DATE: 2001-02-05
PRIOR PRIOR PRIOR DATE: 2001-02-05
PRIOR PRIOR PRIOR DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOFTWARE: PatentIn version 3.0
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TYPE: PRT
ORGANISM: Homo sapiens
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APPLICANT BRISTON.

APPLICANT: BRISTON.

FITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE, MP-1

FILE REFERENCE: DO073 DIV

CURRENT PAPLICATION NUMBER: US/10/651,722

CURRENT FILING DATE: 2003-08-29

PRIOR APPLICATION NUMBER: US 60/266,518

PRIOR PILING DATE: 2001-02-05

PRIOR APPLICATION NUMBER: US 10/067,443

PRIOR APPLICATION NUMBER: US 60/282,814

PRIOR APPLICATION NUMBER: US 60/282,814

PRIOR APPLICATION NUMBER: US 60/282,814

PRIOR PILING DATE: 2001-04-10

NUMBER OF SEQ ID NOS: 71

SOPTWARE: PATENTIN OF SEQ ID NOS: 71

SOPTWARE: PATENTIN VERSION 3.2

SEQ ID NO 2

LENGTH: 414

TYPE: PRT

ORGANISM: Homo sapiens
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; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-649-273-2
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US-10-651-722-2
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Best Local Similarity 100.0%; P
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US-10-480-988-8
PULLICANT: GANDHI Ameena R.; KABLE, Amy E.;
APPLICANT: TRAN, Bao; DUGGAN, Brendan M.;
APPLICANT: HONCHELL, Cynthia D.; MUUTEN, Danniel B.;
APPLICANT: HONCHELL, Cynthia D.; MUUTEN, Danniel B.;
APPLICANT: HONCHELL, Cynthia D.; MUUTEN, Danniel B.;
APPLICANT: GRIFFIN, Jannifer A.; LI, Joana X.;
APPLICANT: GRIFFIN, Jannifer A.; LI, Joana X.;
APPLICANT: HONCHELL, Cynthia D.; MURTANAI, Rajagopal;
APPLICANT: HONCHELL, Cynthia D.; MURTANAI, Rajagopal;
APPLICANT: HASON, Patricia M.; GURTRAJAN, Rajagopal;
APPLICANT: LEE, Sally, BECHA, Shanya D.;
APPLICANT: LEE, SOO Yean; TRAN, Uyen K.;
APPLICANT: LEE, SOO YEAR, SHANYA D.;
APPLICANT: LEE, SOO YEAR, SHANYA D.;
APPLICANT: LEE, SOO YEAR, TRAN, Uyen K.;
APPLICANT: LEE, SOO YEAR, SHANYA D.;
APPLICANT: LEE, SOO YEAR, SHANYA D.;
APPLICANT: LEE, SOO YEAR, SHON, W. Tom;
APPLICANT: LEE, SOO YEAR, SHON, W. Tom;
APPLICANT: LEE, SOO YEAR, SHON, Y. Tom;
APPLICANT: LEE, SOO YEAR, SHON, W. Tom;
APPLICANT: LEE, SOO YEAR, W. TANG, Y. TOM;
APPLICANT: LEE, SOO YEAR, W. TOM;
APPLICANT
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; OTHER INFORMATION: Incyte ID No: 7632424CD1
US-10-480-988-8
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361 IMIAWNGIERLRAGLGILHDIEGIRYEPKCPLGVDISKEVGEASIKVPQLKMEI 414
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                                                      241 PPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQHTMACHLVKR 300
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Search completed: November 11, 2005, 03:25:57 Job time : 113 secs : 113

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Command line parameters:

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-Q-[cgn2_1/USPTO_spool_p/US10649273/runat_02112005_091641_16903/app_query.fasta_1.583
-DB=Issued Patents_NA_-CPMT=fastap_-SUFFIX=oligp2n.rni -MINMATCH=0.I -LOOPCL=0
-LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=oligo -TRANS=human40.cdi
-LIST=45 -DOCALIGN=200 -THR_SCORE=quality -THR_MIN=274 -ALIGN=15 -MODE=LOCAL
-OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLIN=2000000000
-USER=US10649273_@CGN 1 1_105 @runat_02112005_091641_16903 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPELOCK=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=60 -XGAPEXT=60 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=60 -YGAPEXT=60 -DELOP=6 -DELEXT=7
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No.
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US-10-067-443-1
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Perfect score:
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Sequence i, Application US
Patent No. 6642041
GENERAL INFORMATION:
APPLICANT: Bristol-Myers
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Match
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1. /cgn2_6/ptodata/1/ina/5A_COMB.seq:*

2. /cgn2_6/ptodata/1/ina/5B_COMB.seq:*

3. /cgn2_6/ptodata/1/ina/6A_COMB.seq:*

4. /cgn2_6/ptodata/1/ina/6B_COMB.seq:*

5. /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*

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Squibb Company
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FILE REFERENCE: DOOT3 NP
CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn version 3.0 SEQ ID NO 1 LENGTH: 2197
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TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: CDS
LOCATION: (231)..(1472)
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                                                                                                          161 ValGluPheProPheLeuValLeuLeuIleSerGlyGlyHisCysLeuLeuAlaLeuVal
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LeuAspLysValAlaArgArgLeuSerLeuIleLysHisProGluCysSerThrMetSer
                                                     GlnGlyValSerAspPheLeuLeuLeuGlyLysSerLeuAspIleAlaProGlyAspMet
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Sequence 177, Application US/09774528

Patent No. 6743619

GENERAL INFORMATION:
APPLICANT: Tang, Y. Tom
APPLICANT: Zhou, Ping
APPLICANT: Liu, Chenghua
APPLICANT: Liu, Chenghua
APPLICANT: Liu, Chenghua
APPLICANT: Lau, Chenghua
APPLICANT: Asundi, Vinod
APPLICANT: Zhang, Jie
APPLICANT: Zhao, Qing A.
APPLICANT: Yang, Yonghong
APPLICANT: Yang, Yonghong
APPLICANT: Wehlrman, Tom
APPLICANT: Wehlrman, Tom
APPLICANT: Wang, Dunrui
APPLICANT: Wang, Dunrui
APPLICANT: Wang, Changui
APPLICANT: Dranac, Radoje T.
TITLE OF INVENTION: Polypeptides
FILE REFERENCE: 802
CURRENT APPLICATION NUMBER: US/09/774,528
CURRENT APPLICATION NUMBER: US/09/774,528
CURRENT FILING DATE: 2001-01-30
NUMBER OF SEQ ID NOS: 441
SOFTWARE: pt_FL_genes Version 2.0
SEQ ID NO 177
LENGTH: 1416
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: CDS
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                                                                                                                                                                             CysHisLeuValLysArgThrHisArgAlaIleLeuPheCysLysGlnArgAspLeuLeu
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                                                                  ArgAlaLeuGluIleLeuThrAsnAlaThrGlnCysThrLeuLeuCysProProProArg
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                                LeuCysThrAspAsnGlyIleMetIleAlaTrpAsnGlyIleGluArgLeuArgAlaGly 374
                                                                                                                   CCTCAAAATAATGCAGTACTGGTTGCATCTGGTGGTGGTCGCAAGTAACTTCTATATCCGC
                     CTATGCACTGATAATGGCATTATGATTGCATGGAATGGTATTGAAAGACTACGTGCTGGC
                                                                                                                               ProGlnAsnAsnAlaValLeuValAlaSerGlyGlyValAlaSerAsnPheTyrIleArg
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-COMMAIN LIME PARAMETERS - DEV=Xlp
-MODEL=Eframe+ p21n.model -DEV=Xlp
-Q=/Cgn2_1/USPTO_spool_p/US10649273/runat_02112005_091640_16863/app_query.fasta_1.583
-DB=N_Geneseq_16Dec04 -QFWT-fastap -SUFFIX=oligp2n.rng -MINMATCH=0.1 -LOOPCL=0
-LOOPEXT=0 -UNITS=bite -GTART=1 -END=-1 -MATRIX=Oligo -TRANS=luman40_cdi
-LIST=45 -DOCALIGN=200 -THR_SCORE=quality -THR_MIN=274 -ALIGN=15 -MODE=LOCAL
-OUTFMT=pto -NORM=ext -HEAFSIZE=500 -MINLEN=0 -MAXLEN=2000000000
-USER=US10649273 @GCN 1 1 708 @xunat 02112005 091640 16863 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPELOCK=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPDP=60 -XGAPDEXT=60 -FGAPOP=6
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-MODEL=frame+_p2n.model
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170 GAATITITAAGAAGITTTAATTTTCATCCTGGAACACTATTTCTTCATAAAATAGIATTG 21 GluPheLeuArgSerPheAsnDheHisPrcGlyThrLeuPheLeuHisLysIlcValLcu

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41 GlyIleGluThrSerCysAspAspThrAlaAlaAlaValValAspGluThrGlyAsnVal

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                                                                                                                                   US-10-649-273-2 (1-414) x ABA93268 (1-2058)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present sequence encodes human O-sialoglycoproteinase-like protein (OSGPLP). The present invention also describes: (1) the preparation of the OSGPLP protein; (2) applying the OSGPLP protein in diagnosis; (3) the prevention and/or treatment of related diseases; (4) utilising the OSGPLP protein in screening its agonist, excitomotor and inhibitor and preparing an antibody against the OSGPLP protein; and (5) the use of the OSGPLP polymucleotide sequences, proteins, agonists, excitomotors, inhibitors and antibodies in treating diseases related to the abnormal OSGPLP gene and in preparing the medicine composite for the treatment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 2058 BP; 637 A; 400 C; 410 G; 611 T; 0 U; 0 Other;
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                                                                       IleGluGlyIleArgTyrGluProLysCysProLeuGlyValAspIleSerLysGluVal
                                                                                                                           ATTATGATTGCATGGAATGGTATTGAAAGACTACGTGCTGGCTTGGGCATTTTACATGAC
                                                                                                                                             IleMetIleAlaTrpAsnGlyIleGluArgLeuArgAlaGlyLeuGlyIleLeuHisAsp
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## 묽 1310 GGAGAAGCTTCCATAAAAGTACCACAATTAAAAATGGAGATA 1351

11-DEC-2002 ABS76635 standard; novel human (first entry) metalloprotease MP1.

Metalloprotease; MP-1; immune disorder; glutamate transport; cancer; motor neuron disorder; amyotrophic lateral sclerosis; ALS; diabetes; reproductive disorder; Kleinfelter's syndrome; germinal cell aplasia; genital wart; metabolic disorder; premature puberty; Kallman syndrome; Cushing's syndrome; neurodegenerative disease; Alzheimer's disease; Parkinson's disease; Huntington's disease; Tourette syndrome; sepsis; liver disease; renal disease; immune disorder; rheumatoid arthritis; acquired immunodeficiency syndrome; AlDS; pulmonary disease; pneumonia; emphysema; cystic fibrosis; vascular disorder; inflammatory disorder; neurological disorder; gene; ds.

19-SEP-2002.

S В Ś В ঠ 밁 δ 8 ð 밁 S 밁 Ş

05-FEB-2002; 2002WO-US003353

05-FEB-2001; 2001US-0266518P. 10-APR-2001; 2001US-0282814P.

(BRIM ) BRISTOL-MYERS SQUIBB 8

Feder J, Nelson TC, Duclos Ţ Krystek

2002-723329/78. DB; ABG96478.

New isolated nucleic acid encoding MP-1 protein, useful for preventing, treating, or ameliorating diseases associated with aberrant metalloproteinase activity, e.g. immune, metabolic, inflammatory and neurological disorders.

Claim 1; Fig 1A-C; 473pp; English

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ARSTAG The invention describes an isolated nucleic acid molecule (I) encoding a metalloprotease (Mp-1). (I) is useful for preventing, treating, or an CC ameliorating a medical condition, particularly an immune disorder, an caberrant glutemate transport or motor neuron disorder, such as CC amyotrophic lateral sclerosis (ALS), its juvenile form or an ALS-like CC condition. The compositions and methods are also useful for diagnosing, condition. The activity, e.g. diabetes, cancer, reproductive prognosticating, treating, ameliorating and/or treating disorders CC associated with Mp-1 activity, e.g. diabetes, cancer, reproductive associated with Mp-1 activity, e.g. diabetes, cancer, reproductive CC disorders (e.g. Kleinfelter's syndrome, genital warts, or germinal cell capitals), metabolic disorders (e.g. premature puberty, Kallman syndrome, CC or Cushing's syndrome), neurodegenerative diseases (Alzheimer's disease, Funtington's disease or Tourette syndrome), liver CC and renal diseases and immune disorders (e.g. Alzheimer's disease), liver CC and renal diseases and immune disorders (e.g. Alzheimer's disease) and vascular, inflammatory and neurological disorders (e.g. Alzheimer's disease or Parkinson's disease). This sequence represents a content of the conte metalloprotease MP1 polynucleotide

Sequence ₿P; 189 Α, 441 Ç 439 <u>و</u> 636 Ŧ 0 ς; 0 Other;

Score:
Percent Similarity:
Best Local Similarity: Alignment Pred. No.: 414. 100. 100. .00% Length:
Matches:
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                                                                                          SerAlaAlaAspIleAlaAlaThrValGlnHisThrMetAlaCysHisLeuValLysArg
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                                                                                                                                   AspLysIleIleMetLysLysGluLysGluGlyIleGluLysGlyGlnIleLeuSer
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29-AUG-2001;
03-MAY-2002;
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P-PSDB; ABJ26654.
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2001US-0303445P.
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New isolated human PMOD polypeptide and polynucleotide, useful for diagnosing, treating and preventing diseases or conditions associated with the aberrant PMOD expression, e.g. cancer, AIDS, atherosclerosis

The invention relates to an isolated polypeptide comprising: any of sequences of 48-1256 amino acids; a natural amino acid sequence at 1

least 28 Claim

91;

Page

225pp; English.

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CC 90% identical to the 28 amino acid sequences, 94% identical to a sequence CC of 703 or 267 amino acids, 96% identical to a sequence of 414 amino acids, or 97% identical to a sequence of 242 amino acids, all given in CC the specification; or a biologically active or immunogenic fragment of CC in diagnosing, treating and preventing diseases or conditions associated CC with the decreased expression of protein modification and maintenance CC molecules (PMOD), such as cell proliferative diseases (e.g. cancer, CC altergies), neurological disorders (e.g. stroke, Parkinson's disease, CC epilepsy), gastrointestinal (e.g. ulcer, cirrhosis), reproductive (e.g. candentions (e.g. bacterial, vesicle trafficking disorders, and CC infections (e.g. bacterial, viral, parasitic, protozoal). These are also CC useful in assessing the effects of exogenous compounds on the expression CC fragments are useful in screening compounds for effectiveness as agonist CC rantagonist of the polypeptides, or in altering the expression of the captering protein-protein interactions, darug-target interactions, and CC enceding a human PMOD protein of the invention
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Sequence 2572 780 A; 489 Ç 509 ç, 794 T; 0 U; 0 Other;

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GlnGlyValSerAspPheLeuLeuLeuGlyLysSerLeuAspIleAlaProGlyAspMet
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                                                                                                                                                                                                                                                                                                                                                                 MetLeuIleLeuThrLysThrAlaGlyValPhePheLysProSerLysArgLysValTyr
                              ValGluPheProPheLeuValLeuLeuIleSerGlyGlyHisCysLeuLeuAlaLeuVal
                                                                                ProPheIleProIleHisHisMetGluAlaHisAlaLeuThrIleArgLeuThrAsnLys
                                                                                                           GCTTTAAGCCTGGGAGTGGGCTTATCATTTAGCTTACAGCTGGTAGGACAGTTAAAAAAAG
                                                                                                                       AlaLeuSerLeuGlyValGlyLeuSerPheSerLeuGlnLeuValGlyGlnLeuLysLys
                                                                                                                                                             AlaSerGlyValSerProSerAspLeuSerAlaIleAlaThrThrIleLysProGlyLeu
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                  GlyGluAlaSerIleLysValProGlnLeuLysMetGluIle
                                                                                              IleGluGlyIleArgTyrGluProLysCysProLeuGlyValAspIleSerLysGluVal
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GGAGAAGCTTCCATAAAAGTACCACAATTAAAAATGGAGATA
                                                                          ATAGAAGGCATCCGCTATGAACCAAAATGTCCTCTTGGAGTAGACATATCAAAAGAAGTT
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ABX70950 standard; CDNA; 1416 ₽₽

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cDNA sequence #175

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KW GO Human; gene; ss; nervous system disorder; peripheral neuropathy; Huntington's disease; amyotrophic lateral sclerosis; haemophilia; neurodegenerative disease; Parkinson's disease; Alzheimer's disease; autoimmune disease; systemic lupus erythematosus; rheumatoid arthritis; insulin-dependent diabetes mellitus; anaemia; thrombocytopaenia; wound; ulcer; burn; bone disorder; osteoporosis; osteoarthritis; stroke; fibrosis; reperfusion injury; infection; allergic rhinitis; asthma; coagulation disorder; cancer; tumour; inflammatory disease; septic shock; Crohn's disease; anaphylaxis; proliferation; chemotactic; differentiation; stem cell growth factor; haematopoiesis; chemokinetic; haemostatic; antiinflammatory; expressed sequence tag;

17-OCT-2002

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CC This invention relates to the cDNA sequences encoding an isolated novel CC human polypeptide. The protein encoded by the nucleic acid of the CC invention is useful for treating central and peripheral nervous system CC diseases (e.g. peripheral neuropathy, Huntington's disease, amyotrophic lateral sclerosis); neurodegenerative disease (e.g. Parkinson's disease, CC lateral sclerosis); neurodegenerative disease (e.g. Barkinson's disease, CC lateral sclerosis); neurodegenerative diseases (e.g. Barkinson's disease, CC erythematosus, Theumatoid arthritis, insulin-dependent diabetes mellitus); myeloid or lymphoid cell disorders (e.g. systemic lupus ; wounds, ulcers, burns; bone disorders (e.g. stroke, head traumal); lung or liver fibrosis; reperfusion injury in various tissues; bacterial, viral or fungal infections; allergic conditions such as clargic rhinitis, asthma; coagulation disorders (e.g. haemophilia); cancer and tumours; and inflammatory diseases (e.g. septic shock, Crohn's disease, anaphylaxis). The protein may be used to inhibit the growth, CC disease, anaphylaxis). The protein may also have coycles of rhythms. The protein may also have activities. The cDNA sequences of the invention are useful for expressing recombinant protein for analysis. The present sequence represents a novel human cDNA sequence of the invention, this sequence is an expressing combinant protein for analysis. The present sequence is an expressed sequence tag (EST) and was identified using subtractive hybridisation
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
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Yang Y,
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                         ValĞİyGİnLeuLysLysProPheIleProIleHisHisMetGluAlaHisAlaLeuThr
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GTAGGACAGTTAAAAAAAGCCATTCATTCCCCATTCATCATATGGAGGCTCATGCACTTACT
                                                                                                  ACCATAAAACCAGGACTTGCTTTAAGCCTGGGAGTGGGCTTATCATTTAGCTTACAGCTG
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A 1302	GACATATCAAAAGAAGTTGGAGAAGCTTCCATAAAAGTACCACAATTAAAAATGGAGATI	1243	망
e 414	ABPIleSerLysGluValGlyGluAlaSerIleLysValProGlnLeuLysMetGluIle	395	Ş
A 1242	TTGGGCATTTTACATGACATAGAAGGCATCCGCTATGAACCAAAATGTCCTCTTGGAGTA	1183	В
1 394	LeuGlyIleLeuHisAspIleGluGlyIleArgTyrGluProLysCysProLeuGlyVal	375	S
C 1182	CTATGCACTGATAATGGCATTATGATTGCATGGAATGGTATTGAAAGACTACGTGCTGGC	1123	망
y 374	LeuCysThrAspAsnGlyIleMetIleAlaTrpAsnGlyIleGluArgLeuArgAlaGl	355	8
A 1122	AGAGCTCTGGAAATTTTAACAAACGCAACACAGTGCACTTTGTTGTGTCCTCCTCCCAGA	1063	뮍
·9 354	ArgAlaLeuGluIleLeuThrAsnAlaThrGlnCysThrLeuLeuCysProProProArg	335	Ş
C 1062	CCTCAAAATAATGCAGTACTGGTTGCATCTGGTGGTGTCGCAAGTAACTTCTATATCCGC	1003	В
g 334	ProGlnAsnAsnAlaValLeuValAlaSerGlyGlyValAlaSerAsnPheTyrIleArq	315	Ş
A 1002	TGTCATCTTGTGAAAAGAACACATCGGGCTATTCTGTTTTGTAAGCAGAGAGACTTGTTA	943	뮍
u 314	CysHisLeuValLysArgThrHisArgAlaIleLeuPheCysLysGlnArgAspLeuLe	295	Ş
A 942	AAGGGCAAATCCTGTCTTCAGCAGCAGACATTGCTGCCACAGTACAGCACACAATGGCA	883	망
a 294		275	Ş
G 882	GGACTTCAACACGTTACTGATAAAATAATAATGAAAAAGGAAAAAGGGAAGGTATTGAG	823	뮍
u 274	GlyLeuGlnHisValThrAspLysIleIleMetLysLysGluLysGluGluGlyIleGl	255	S
T 822	TTTCATTTTGACATCAAACCTCCCTTGCATCATGCTAAAAATTGTGATTTTTCTTTTACT	763	뫄
r 254	PheHisPheAspIleLysProProLeuHisHisAlaLysAsnCysAspPheSerPheTh	235	Ş
  A 762	GAGTGCTCCACCATGAGTGGTGGGAAAGCCCATAGAACATTTGGCCAAACAAGGAAATAGA	703	ДЬ
g 234		215	Ş
:A 702	ATAGCACCAGGTGACATGCTTGACAAGGTGGCAAGAAGACTTTCTTT	643	дg
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C 642	TGTCTGTTGGCATTAGTTCAAGGAGTTTCAGATTTTCTGCTTCTTGGAAAGTCTTTGGAC	583	밁
ip 194		175	Ş
C 582	ATTAGGTTGACCAATAAAGTAGAATTTCCTTTTTTAGTTCTTTTTGATTTTCTGAGGTCAC	523	<del>0</del>
s 174	- H	155	5

Search completed: November 11, Job time : 895 secs 2005, 03:41:03

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Command line parameters:

-MODEL=frame+_p2n.model -DEV=xlp
-Q-[cgn2_1/USPTO_spool_p/US10649273/runat_02112005_091641_16886/app_query.fasta_1.583
-Da=EST_-CPMT=fastap_-SUFFIX=01igp2n.rst -MINMATCH=0.1 -LOOPCL=0 -LOOPEXT=0
-UNITS=bits -START=1 -END=-1 -MATRIX=01igo -TRANS=human40.cdi -LIST=45
-DOCALIGN=200 -THR_SCORE=quality -THR_MIN=274 -ALIGN=15 -MODE-LOCAL
-OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=2000000000
-USER=US10649273_9CGN 1_1_5180_@runat_02112005_091641_16886 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DEV_TIMEDUT=120 -WARN_TIMEDUT=30 -THREADS=1 -XGAPOP=60 -XGAPEXT=60 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=60 -YGAPEXT=60 -DELOP=6 -DELEXT=7
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Maximum DB seq length: 200000000
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No matches found
                                                                                                                                                                          Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                  Score
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Copyright (c) 1993 - 2005 Compugen Ltd.
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Search completed: November 11, 2005, 07:15:50 Job time : 5350 secs

GenCore version 5.1.6 (c) 1993 - 2005 Compu

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Result
No.
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COMMENT

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PEATURES

Series:

IRAL Place: 28 Row; i Column: 2

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SOURCE KEYWORDS

JOURNAL PUBMED REFERENCE AUTHORS RESULT 1 BC011904 LOCUS ACCESSION VERSION REFERENCE DEFINITION AUTHORS JOURNAL ORGANISM Strausberg, L., Feingold, E.A., Grouse, L.H., Derge, J.G.,
Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
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Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,
Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,
Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,
Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E.,
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Generation and initial analysis of more than 15,000 full-length web site: http://www.nisc.nih.gov/
Contact: nisc\_mgc@nbgri.nih.gov
Akhter,N., Ayele,K., Beckstrom-Sternberg,S.M., Benjamin,B.,
Blakesley,R.W., Bouffard,G.G., Breen,K., Brinkley,C., Brooks,S.,
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Gaithersburg, Maryland; Clone distribution: MGC clone distribution information can be found through the I.M.A.G.B. Consortium/LLNL at: http://image.llnl.gov NIH-MGC Project URL: http://mgc.nci.nih.gov On Dec 19, 2003 this sequence version replace Contact: MGC help desk Email: cgapbs-romail.nih.gov Direct Submission
Submitted (30-JUL-2001) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590, Tissue Procurement: ATCC Strausberg, R. BC011904 1908 bp mRNA linear Homo sapiens O-sialoglycoprotein endopeptidase-like clone MGC:20293 IMAGE:4121450), complete cds. human and mouse cDNA sequences Proc. Natl. Acad. Sci. U.S.A. Homo sapiens (human). BC011904 (bases 1 to 1908) mmalia; Eutheria; (bases 1 to 1908) sapiens Zhang, L.-H. and Green, E.D. Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; utheria; Primates; Catarrhini; Hominidae; Homo. U.S.A. 99 (26), 16899-16903 (2002) version replaced gi:15080281. PRI 23-DEC-2003 mRNA (cDNA

TITLE

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Percent Similarity:
Best Local Similarity:
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1 (bases 1 to 2197)

1 (bases 1 to 2197)

Chen, J., Feder, J.N., Nelson, T.C., Krystek, S.R. and Duclos, F. Polynucleotides encoding a novel metalloprotease, MP-1 Patent: US 6642041-A 1 04-NOV-2003;

Patent: US 6642041-A 1 04-NOV-2003;

1 1 2197
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1190 340	131 ACACATCGGGCTATTCTGTTTTGTAAGCAGAGACTTGTTACCTCAAAATAATGCAGTA 321 LeuValAlaSerGlyGlyValAlaSerAsnPheTyrIleArgArgAlaLeuGluIleLeu	Db 1
20	301 ThrHisArgAlaIleLeupheCysLysGlnArgAspLeuLeuproGlnAsnAsnAlaVal	
300 1130	281 SerAlaAlaAspIleAlaAlaThrValGlnHisThrMetAlaCysHisLeuValLysArg	Qy 1
280	261 ASpLysIleIleMetLysLysGluLysGluGluGlyIleGluLysGlyGlnIleLeuSer 	Qy Db 1
260	241 ProProLeuHisHisAlaLysAsnCysAspPheSexPheThrGlyLeuGlnHisValThr 	B 8
240 950	221 GlyGlyLysAlaIleGluHisLeuAlaLysGlnGlyAsnArgPheHisPheAspIleLys 	B &
220 890	201 LeuAspLysValAlaArgArgLeuSerLeuIleLysHisProGluCysSerThrMetSer 	g Qy
200 830	181 GlnGlyValSerAspPheLeuLeuGlyLysSerLeuAspIleAlaProGlyAspMet	dy dy
180 770		B &
160 710	141 ProPheIleProIleHisHisMetGluAlaHisAlaLeuThrIleArgLeuThrAsnLys 	Дb
140 650	121 AlaLeuSerLeuGlyValGlyLeuSerPheSerLeuGlnLeuValGlyGlnLeuLysLys 	Db Qy
120 590	101 AlaSerGlyValSerProSerAspLeuSerAlaIleAlaThrThrIleLysProGlyLeu	Db Qy
100	81 ProAlaAlaGinGinLeuHisArgGluAsnIleGinArgIleValGinGluAlaLeuSer 	dd .
80 470	61 LeuGlyGluAlaIleHisSerGlnThrGluValHisLeuLysThrGlyGlyIleValPro	Oy Oy
60 410	41 GlyileGluThrSerCysAspAspThrAlaAlaAlaValValAspGluThrGlyAsnVal	Db Qy
40 350	21 GluPheLeuArgSerPheAsnPheHisProGlyThrLeuPheLeuHisLysIleValLeu 	Qу
20 290	1 MetLeuIleLeuThrLysThrAlaGlyValPhePheLysProSerLysArgLysValTyr 	dg VQ
	-273-2 (1-414) x AR428803 (1-2197)	US-10-649-
	### 1414.00 Matches: 414 ###################################	Score: Percent Si Best Local Query Matc DB:

Ş	용 성	B &	g Q	B &	gg Q	US-10-6	Alignment Pred. No.: Score: Percent Si Best Local Query Matc	ORGANISM REFERENCE AUTHORS TITLE JOURNAL FEATURES SOURC ORIGIN	RESULT 3 AR541929 LOCUS DEFINITION ACCESSION VERSION KEYWORDS SOURCE	g Q	ob Vy	D Q	Qу Db	<b>D</b> .
175 CysLeuLeuAlaLeuValGlnGlyValSerAspPheLeuLeuLeuGlyLysSerLeuAsp 194	155 IleArgLeuThrAsnLysValGluPheProPheLeuValLeuLeuIleSerGlyGlyHis 174	135 ValGlyGlnLeuLysLysProPheIleProIleHisHisMetGluAlaHisAlaLeuThr 154 	115 ThrīleLysProGlyLeuAlaLeuSerLeuGlyValGlyLeuSerPheSerLeuGlnLeu 134 	95 ValGlnGluAlaLeuSerAlaSerGlyValSerProSerAspLeuSerAlaIleAlaThr 114 	75 ThrGlyGlyIleValProProAlaAlaGlnGlnLeuHisArgGluAsnIleGlnArgIle 94 	49-273-2 (1-414) x AR541929 (1-1416)	nment Scores:  1. No.:  340.00  Matches:  340  Conservative:  Conservative:  Mismatches:  Mismat	. 6	3 9 AR541929 1416 bp DNA linear PAT 08-OCT-2004 TON Sequence 177 from patent US 6743619. ON AR541929 C AR541929.1 GI:53934009 S Unknown.	401 GlyGluAlaSerIleLysValProGlnLeuLysMetGluIle 414 	381 IleGluGlyIleArgTyrGluProLysCysProLeuGlyValAspIleSerLysGluVal 400 	361 IleMetIleAlaTrpAsnGlyIleGluArgLeuArgAlaGlyLeuGlyIleLeuHisAsp 380 	341 ThrAsnAlaThrGlnCysThrLeuLeuCysProProArgLeuCysThrAspAsnGly 360 	

음 성 음

195 IlealaPTOGIYASGMCTTCAAGAGTTTCAGATTTCTGCTTCTTGGAAAGTCTTTGGAC 642 195 IlealaPTOGIYASDMCLEUASDLYSValAlaArgArgLeuSerLeulleLySHisPro 214

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Search completed: November 11, 2005, 05:46:33 Job time : 7527 secs

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## SUMMARIES

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05-FEB-2001; 2001US-0266518P. 10-APR-2001; 2001US-0282814P.

BRIM ) BRISTOL-MYERS SQUIBB

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05-FEB-2002; 2002WO-US003353.

19-SEP-2002.

The invention describes an isolated nucleic acid molecule (I) encoding metalloprotease (MP-1). (I) is useful for preventing, treating, or

New isolated nucleic acid encoding MP-1 protein, useful for preventing, treating, or ameliorating diseases associated with aberrant metalloproteinase activity, e.g. immune, metabolic, inflammatory and neurological disorders.

Claim 5;

Page

29; 473pp; English.

N-PSDB;

2002-723329/78. )B; ABS76639.

Chen J,

Feder J,

Nelson TC,

Duclos F,

Krystek

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20.9 20.9 20.3 20.3 20.3 20.3 20.0 20.2 20.2 20.3 20.3	20.9 20.9 20.3 342 20.3 349 20.3 357 20.2 337 20.2 337 20.0 335 6 20.0 335 6 20.0 337 6 20.0 337 6 20.0 337 6 20.0 337 6 20.0 337 6 20.0 337 6 6 337 6 6 337 6 6 337 6 6 337 6 6 6 6							39 27									30 27				
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# ALIGNMENTS

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RESULT 1
ABG96487
Metalloprotease; MP-1; immune disorder; glutamate transport; cancer; motor neuron disorder; amyotrophic lateral sclerosis; ALS; diabetes; reproductive disorder; Kleinfeleer's syndrome; germinal cell aplasia; genital wart; metabolic disorder; premature puberty; Kallman syndrome; Cushing's syndrome; neurodegenerative disease; Alzheimer's disease; Parkinson's disease; Huntington's disease; Tourette syndrome; sepsis; liver disease; renal disease; immune disorder; rheumatoid arthritis; acquired immunodeficiency syndrome; AIDS; pulmonary disease; pneumonia; emphysema; cystic fibrosis; vascular disorder; inflammatory disorder; neurological disorder.
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RESULT 2
ABG96478
ID ABG9
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DE Nove
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Metalloprotease; MP-1; immune disorder; glutamate transport; cancer; motor neuron disorder; amyotrophic lateral sclerosis; ALS; diabetes; reproductive disorder; Kleinfelter's syndrome; germinal cell aplasia; genital wart; metabolic disorder; premature puberty; Kallman syndrome; Cushing's syndrome; neurodegenerative disease; Alzheimer's disease; Parkinson's disease; Huntington's disease; Tourette syndrome; sepsis; liver disease; renal disease; immune disorder; rheumatoid arthritis; liver disease; renal disease; immune disorder; rheumatoid arthritis;
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emphysema; cystic fibrosis; vascular disorder; inflammatory disorder;
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   05-FEB-2001; 2001US-0266518P
                                                                              05-FEB-2002; 2002WO-US003353
                                                                                                                                                            19-SEP-2002.
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                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                    neurological disorder.
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Pred. No. 1.4e-147;
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RESULT 3
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ABB05481 standard; protein; 414

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Human; O-sialoglycoproteinase-like

protein; OSGPLP; enzyme

Human O-sialoglycoproteinase-like protein SEQ ID NO:2.

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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      aberrant glutamate transport or motor neuron disorder, such as amyotrophic lateral sclerosis (ALS), its juvenile form or an ALS-like condition. The compositions and methods are also useful for diagnosing, prognosticating, treating, ameliorating and/or treating disorders associated with MP-1 activity, e.g. diabetes, cancer, reproductive disorders (e.g. Kleinfelter's syndrome, genital warts, or germinal cell aplasial, metabolic disorders (e.g. premature puberty, Kallman syndrome, or Cushing's syndrome), neurodegenerative diseases (Alzheimer's disease, Parkinson's disease, Huntington's disease or Tourette syndrome), liver and renal diseases and immune disorders (e.g. AIDS, rheumatoid arthritis or sepsis), pulmonary diseases (e.g. pneumonia, emphysema or cystic fibrosis) and vascular, inflammatory and neurological disorders (e.g. Alzheimer's disease or Parkinson's disease). This is the amino acid sequence of a metalloprotease MPI protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention describes an isolated nucleic acid molecule (I) encoding metalloprotease (MP-1). (I) is useful for preventing, treating, or ameliorating a medical condition, particularly an immune disorder, an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New isolated nucleic acid encoding MP-1 protein, useful for preventing, treating, or ameliorating diseases associated with aberrant metalloproteinase activity, e.g. immune, metabolic, inflammatory and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 414 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 5; Fig 1A-C; 473pp; English.
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                                                                                                                                                                         EKEEGIEKGQILSSAADIAATVQHTMACHLVKRTHRAILFCKQRDLLPQNNAVLVASGGV
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PKCPLGVDISKEVGEASIKVPQLKMBI 414
                    PKCPLGVDISKEVGEASIKVPQLKMEI 267
                                                                            ASNFYIRRALEILTNATQCTLLCPPPRLCTDNGIMIAWNGIERLRAGLGILHDIEGIRYE
                                                                                                ASNFYIRRALEILTNATQCTLLCPPPRLCTDNGIMIAWNGIERLRAGLGILHDIEGIRYE
                                                                                                                                                       EKEEGIEKGQILSSAADIAATVQHTMACHLVKRTHRAILFCKQRDLLPQNNAVLVASGGV
                                                                                                                                                                                                                                                                                                                                                                                           Conservative
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                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 1385; DB 5; 100.0%; Pred. No. 2.8e-147; ive 0; Mismatches 0;
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ABJ26654
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Best Local S
Matches 267
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   O-sialogycoproteinase-like protein and encoding for diagnosing, preventing and treating related
                cerebroprotective; antiparkinsonian; nootropic; antiinflammatory;
antiulcer; hepatotropic; gynaecological; antibacterial; virucide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mao
   protozoacide;
                                              Cytostatic;
                                                                                                        01-MAY-2003
                                                                                                                                                             ABJ26654 standard; protein;
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DB; ABA93268.
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                                                                          protein
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                                                                                                                                                                                                                                                      PKCPLGVDISKEVGBASIKVPQLKMBI
                                                                                                                                                                                                                                                                                                              ASNFYIRRALEILTNATQCTLLCPPPRLCTDNGIMIAWNGIERLRAGLGILHDIEGIRYE
                                                                                                                                                                                                                                                                                                                                                                         EKEEGIEKGQILSSAADIAATVQHTMACHLVKRTHRAILFCKQRDLLPQNNAVLVASGGV
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEAHALTIRLTNKVEFPFLVLLISGGHCLLALVQGVSDFLLLGKSLDIAPGDMLDKVARR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              414 AA;
                                                                                                                                                                                                                                                                                                ASNFYIRRALEILTNATQCTLLCPPPRLCTDNGIMIAWNGIERLRAGLGILHDIEGIRYE
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                                                                                                                                                                                                                                                                                                                                                                                                                   LSLIKHPECSTMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKK
                                                                                                                                                                                                                                       PKCPLGVDISKEVGEASIKVPQLKMEI 414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                              antiarteriosclerotic; anti-HIV; antiallergic;
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                                                                                                        (first
                                                                          modification + maintenance molecule protein
                                                                                                        entry)
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                                              anticonvulsant;
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The invention relates to an isolated polypeptide comprising: any of 28 cs sequences of 48-1256 amino acids; a natural amino acid sequence at least CC 90% identical to the 28 amino acid sequences, 94% identical to a sequence cof 703 or 267 amino acids, 96% identical to a sequence of 414 amino ccids, or 97% identical to a sequence of 242 amino acids, all given in CC the specification; or a biologically active or immunogenic fragment of CC the isolated polypeptide. The polypeptides and polymucleotides are useful cci in diagnosing, treating and preventing diseases or conditions associated with the decreased expression of protein modification and maintenance CC molecules (PMOD), such as cell proliferative diseases (e.g. AIDS, CC allergies), neurological disorders (e.g. stroke, Parkinson's disease, CC endometriosis), developmental (e.g. ulcer, cirrhosis), reproductive (e.g. cendertions), developmental, veral, parasitic, protozoal). These are also CC useful in assessing the effects of exogenous compounds on the expression of mucleic acid and amino acid sequences of PMOD. The PMOD or its crayents are useful in screening compounds for effectiveness as agonist or antagonist of the polypeptides, or in altering the expression of the target polymucleotide and compounds that specifically bind to or modulate the activity of the polypeptide. The microarray is useful in monitoring cof the activity of the polypeptide. The microarray is useful in monitoring, and compounds compounds a human PMOD protein interactions, drug-target interactions, and compounds compounds a human PMOD protein interactions.
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06-JUL-2001; 2001US-0303445P.
13-JUL-2001; 2001US-035465P.
09-AUG-2001; 2001US-0311442P.
24-AUG-2001; 2001US-0314821P.
29-AUG-2001; 2001US-0378205P.
03-MAY-2002; 2002US-0378205P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New isolated human PMOD polypeptide and polynucleotide, useful for diagnosing, treating and preventing diseases or conditions associated with the aberrant PMOD expression, e.g. cancer, AIDS, atherosclerosis
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invention
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ML, Yao MG;
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                                                                                                                                                                                                                                                                                                                                                                                                                             endothelial cell disorder; Grave's disease; psoriasis; brain disorder; Parkinson's disease; Alzheimer's disease; haematopoietic disorder;
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08-NOV-2000;
15-NOV-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New 38650, 28472, 5495, 65507, 81588 or 14354 nucleic acid molecules, useful for diagnosing and treating cancer, immune, cardiovascular, hematopoietic, brain, pain, metabolic, liver or platelet disorders, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 414
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Novel

human glycoprotease 28472

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CC 14354 nucleic acid molecules (I) and their encoded polypeptides (II). The C2 38650 nucleic acid molecule comprises a sequence encoding adenosine CC deaminase. The 28472 nucleic acid molecule comprises a sequence encoding adenosine CC ahuman glycoprotease. The 5495, 65507, 81588 and 14354 comprise CC 38650, 28472, 5495, 65507, 81588 or 14354 nucleic acid and polypeptide CC sequences that encode a human seven transmembrane domain (7TM). The CC 38650, 28472, 5495, 65507, 81588 or 14354 nucleic acid and polypeptide CC with or at risk of developing a disorder, e.g. cancer or aberrant CC cellular proliferation and/or differentiation (e.g. breast, ovarian, CC prostate, colon or lung cancer), immune disorders, heart disorders, CC cardiovascular disorders, endothelial disorders, heart disorders, CC liver disorders or platelet disorders, pain and metabolic disorders, CC liver disorders or platelet disorders, autoimmune disorders include carcinoma, 1 eukaemia, Hodgkin's disease, autoimmune disorders include carcinoma, CC ischaemia, heart disease, Crohn's disease, autoimmune disorders, CC ischaemia, parand's disease, aneurysm, cerebral ischaemia, peripheral carcinome, Raynand's disease, Parkinson's disease, anorexia nervosa, CC cachexia or diabetes. This is the amino acid sequence of the novel human
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New adenosine deaminase, glycoprotease and seven transmembrane domain nucleic acids and polypeptides, designated 38650, 28472, 5495, 65507, 81588 and 14354, useful for treating e.g. leukemias, Hodgkin's disease
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08-NOV-2000; 2000US-0246772P
15-NOV-2000; 2000US-0249185P
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                                                                                                                                                               Sequence 414 AA;
                                                                                                                                                                                                                                                   glycoprotease
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (MILL-) MILLENNIUM PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             invention describes isolated 38650, 28472, 5495, 65507, 81588 and s4 nucleic acid molecules (I) and their encoded polypeptides (II). The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2003-029938/02
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    Conservative
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Score 1348; DB 6; Length 414; Pred. No. 4.3e-143; Mismatches 4; Indels
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The invention relates to an isolated 38650 (encoding adenosine deaminase), 28472 (encoding a glycoprotease), 5495 (encoding a 7 transmembrane receptor), 65507, 81588 or 14354 nucleic acid molecule (o a sequence which is at least 60% identical to the six nucleic acids or their open reading frames, fragments of at least 15 nuclearides, naturally occurring variants, or a DNA insert of the plasmid deposited with the American Type Culture Collection as Accession No. not defined the specification, which encodes the amino acid sequence). Also include are a host cell containing the nucleic acids (used to produce the
                                                                                                                                                                                  New isolated 38650, 28472, 5495, 65507, 81588 and 14354 nucleic acid molecules, useful for diagnosing, treating cancer, pain, or immune, heart, endothelial cell, hematopoeitic, blood vessel, brain, metaboli and liver disorders.
                                                                                                                                                                                                                                                                                                                                      (LEIB/)
(KAPE/)
(GLUC/)
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08-NOV-2000; 2000US-0246772P.
15-NOV-2000; 2000US-0249185P.
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                                                                                                                                                        Claim 4;
                                                                                                                                                                                                                                                                N-PSDB; ACA60887.
                                                                                                                                                                                                                                                                                                        Leiby KR,
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                                                                                                                                                                                                                                                                            WPI; 2003-428888/40.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               liver disorder; platelet disorder; glycoprotease.
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                                                                                                                                                                                                                                                                                                                                      LEIBY K R.
KAPELLER-LIBERMANN
GLUCKSMANN M A.
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Matches 260; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cytostatic; Anti-inflammatory; Osteopathic; Neuroprotective; Nootropic; Gene Therapy; human; secretory protein; membrane proteins; cancer; inflammatory disease; osteoporosis; neurological disease.
                        WPI; 2003-395539/38.
N-PSDB; ADA52832.
                                                                                                    Yamamoto J, Isono Y,
Seki N, Yoshikawa T,
                                                                                                                                                                                                                                                                                           14-SEP-2001;
24-JAN-2002;
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2002US-0350435P.
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BIOTECHNOLOGY.
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97.4%;
                                                                                                    Hio Y, Ot
Otsuka M,
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Pred. No. 4.3e-143;
3; Mismatches 4;
                                                                                                    i T, Wakamatsu A, Sato H, Is
Otsuka K, Nagai K, Irie R,
M, Nagahari K, Masuho Y;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New polynucleotides encoding full-length polypeptides, e.g. secretory and/or membrane proteins, useful for developing medicines for diseases which the gene is involved, or as target molecules for gene therapy.
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                                               Disclosure; SEQ ID NO 34191; 21pp + Sequence Listing; English
                                                                                                                      New isolated nucleic a
                                                                                                                                                                                               WPI; 2001-656860/75.
N-PSDB; ABL13236.
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11-JUL-2000; 2000US-00614150
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Pred. No. 1.1e-115;
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The invention relates to

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY52216 standard; protein;
                                                22-322-1996;
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               (GLAX ) GLAXO
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RRLRLHILPEYRLWNGGRAIEHAAQLASDPLAYEFPLPLAQQRNCNFSFAGIKNNSFRAI
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                                                                                                                                                                                                                                                                                                                                                                                     resistance; drug target.
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Pred. No. 1.4e-37;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the ygjD family, after the name given to the Escherichia coli family member. These proteins are essential for the survival of both Gram negative and Gram positive bacteria, although no function has as yet been ascribed to these proteins. The ygjD proteins, fragments of ygjD proteins (for example, fragments encompassing one or more conserved ygjD motifs such as AAY52218-Y52284) and nucleotides encoding them can be used to identify antagonists and broad spectrum antibacterial compounds. These antagonists and compounds can be used to treat a wide range of bacterial infections. New antibiotics are urgently needed, as serious bacterial infections and antibiotic resistant strains are becoming increasingly prevalent. The proteins of the invention are essential proteins for bacterial viability, and represent new targets for antibiorican
25-FEB-1999;
05-MAR-1999;
                                              25-FEB-2000;
                                                                                                         EP1033405-A2
                                                                                                                                   Arabidopsis thaliana.
                                                                                                                                                                   termination
                                                                                                                                                                             Protein identification; signal transduction pathway; metabolic hybridisation assay; genetic mapping; gene expression control;
                                                                                                                                                                                                                            Arabidopsis thaliana protein fragment SEQ ID NO:
                                                                                                                                                                                                                                                           17-OCT-2000
                                                                                                                                                                                                                                                                                                                      AAG19287 standard;
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Pred. No. 8.2e-37;
7; Mismatches 91
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                Protein identification; signal transduction pathway; metabolic hybridisation assay; genetic mapping; gene expression control; termination sequence.
                                                                                                       AAG19286 standard;
                                                  Arabidopsis thaliana protein fragment SEQ ID NO: 21030.
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nilarity 38.7%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10-SEP-1999;
13-SEP-1999;
15-SEP-1999;
16-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          27-AUG-1999;
27-AUG-1999;
30-AUG-1999;
31-AUG-1999;
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07-SEP-1999
                       232
                                                                                                                                             315
                                                                                                                                                                                                                                                                                                            200
                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                                            98;
                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
HDIEGIRYEPKCP 244
                                                           KEKEEGIEKGQILSSA------ADIAATVQHTMACHLVKRTHRAILFCKQRDLLPQNN
                                                                                                                                                                                                                            WLGLDMH-----RSGGPAVEELALEGDAKSVKFNVPMKYHKDCNFSYAGLKTQVRLATEA
                                                                                                                                                                                                                                                     RLSLIKHPECSTMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMK
                                                                                                                                                                                                                                                                                                            MEAHTLVARLVEQELSFPFMALLISGGHNLLVLAHKLGQYTQLGTTVDDAIGEAFDKTAK
                                                                                                                                                                                                                                                                                                                                   MEAHALTIRLT-NKVEFPFLVLLISGGHCLLALVQGVSDFLLLGKSLDIAPGDMLDKVAR
                                                                                                                                         KE----IDAKCPVSSATNEDRRNRADIAASFQRVAVLHLEEKCERAIDWALE---LEPSI
                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99US-0151066P.
99US-0151080P.
99US-0151303P.
99US-0151438P.
99US-0151930P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99US-0161920P.
99US-0161992P.
99US-0161993P.
99US-0162142P.
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99US-015479P

99US-0155486P

99US-015659P

99US-015659P

99US-0157117P

99US-0157865P

99US-0158232P

99US-0158232P

99US-0159294P

99US-0159294P

99US-0159231P

99US-0159331P

99US-0159331P

99US-0159638P

99US-0160741P

99US-0160770P

99US-0160814P

99US-0160814P

99US-0160814P

99US-0160980P

99US-0161404P

99US-0161406P

99US-0161360P

99US-0161360P

99US-0161360P

99US-0161360P
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99US-0153070P
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99US-0154018P
                                                                                                                                                                                                                                                                                                                                                                                                               28.8%;
38.7%;
                                                                                                                                                                                                                                                                                                                                                                                          34;
                                                                                                                                                                                                                                                                                                                                                                                          Score 398.5; DB 3
Pred. No. 1.4e-35;
4; Mismatches 90
                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 3;
                                                                                                                                                                                                                                                                                                                                                                                            <del>,</del> 06
                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                     444;
                                                                                                                                                                                                                                                                                                                                                                                            31;
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                                                                                                                                                                                   171
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Best Local S
                                                                                                                                                                                                                                                                                                    The present invention relates to nucleic acid vaccines for conferring immunity to rickettsial infection, including Ehrlichia ruminantium (formerly Cowdria ruminantium). The invention also relates to novel E. ruminantium polynucleotides and their corresponding proteins. Sequences of the invention are useful for inducing immunity, particularly protective immunity. They are also useful for detecting the presence of E. ruminantium in a biological sample. They are useful in vaccines for protecting animals or humans against rickettsial diseases, e.g. typhus, spotted fever or heart water. Sequences of the invention are useful for detecting antibodies to pathogens. The present sequence is E. ruminantium hypothetical o-sialoglycoprotein endopeptidase (lhworf4) protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Vaccine; immunity; rickettsial infection; spotted fever; heart water; typhus; pathogen; immunostimulant; antibacterial; lhworf4; enzyme; o-sialoglycoprotein endopeptidase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ehrlichia ruminantium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ehrlichia ruminantium hypothetical o-sialoglycoprotein endopeptidase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAE31054
                                                                                                                                                                                                                                                                             Sequence 251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New Ehrlichia ruminantium polynucleotides, useful as vaccines for inducing protective immunity, and protecting animals or humans agrickettsial diseases, e.g. typhus, spotted fever or heart water.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N-PSDB; AAD48239.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Moreland AL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Barbet AF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-FEB-2001; 2001US-0269944P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20-FEB-2002; 2002WO-US005772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-AUG-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2002-723186/78.
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133
                                                                                                                                                           80
                                                                                                                               61
                                                                                                                                                                                                                      6;
                                                                                                                                                                                                                                   Similarity
                                                                                                                             LSLIKHPECSTMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Page 67-68; 206pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                standard; protein; 251
                                              KYIDN-----
                                                                       EKEEGIEKGQILSSAADIAATVQHTMACHLVKRTHRAI-----LFCKQRDLLPQNNAVLV
                                                                                                     LNL-GYP----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Whitmire
,, Mwangi
                                                                                                                                                                                                                       Conservative
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                                                                                                                                                                                                                                  24.7%;
                                            -DFICNISASFQDCIGDILVNRITNAIHMSQAINCKINK-----LV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DM,
                                                                                                     -GGPIIEKKSIMGDSKSFFLPRALINRLGCDFSFSGIKTAVRNIVVNQ 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kamper SM,
Mcguire TC,
                                                                                                                                                                                                                      39;
                                                                                                                                                                                                                    Score 342; DB 5;
Pred. No. 1.4e-29;
9; Mismatches 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Simbi BH,
Mahan SM;
                                                                                                                                                                                                                         90;
                                                                                                                                                                                                                                                 Length 251;
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                                                                                                                                                                                                                       Indels
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                                                          CC encoding a polypeptide whose expression is inhibited by the antisense concleic acid; (2) a host cell containing the vector; (3) an isolated concleic acid; (4) an antibody capable of specifically binding cantisense nucleic acid; (4) an antibody capable of specifically binding consideration or the activity of a gene in an operon required for proliferation; (7) identifying a compound that influences the activity of the gene product or that has an activity against a biological pathway capable of specifical pathway of identifying a gene required for callular proliferation or the biological pathway in which a proliferation-required gene or its gene product lies coraganism acts; (9) manufacturing an antibiotic; (10) profiling a compound's activity; (11) a culture comprising strains in which the gene conduct is overexpressed or underexpressed; (12) determining the extent convoice each of the strains; or (13) identifying the target of a compound that inhibits the confiction of an organism. The antisense nucleic acids are useful for cidentifying proteins or screening for homologous nucleic acids required confiction sidency provides activity profiferation to isolate candidate molecules for rational confiction of an organism to isolate candidate molecules for rational conficulation to isolate candidate molecules for rational confiction of an organism to isolate candidate molecules for rational configuration to require the candidate molecules for rational configuration to require the candidate molecules for rational configuration to require the candidate molecules for rational configuration to require the candidate molecules for rational configuration to require the candidate and candidate molecules for rational configuration to require the candidate molecules for rational configuration to require the candidate molecules for rational configuration to require the candidate candidate molecules for rational configuration to require the candidate candidate molecules for rational configuration to require the candidate candida
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the 6213 antisense sequences given in the specification where expression of the nucleic acid inhibits proliferation of a cell. Also included are:

(1) a vector comprising a promoter operably linked to the nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New antisense nucleic acids, useful for identifying proteins or screening for homologous nucleic acids required for cellular proliferation to isolate candidate molecules for rational drug discovery programs.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21-MAR-2001; 2001US-00815242.
06-SEP-2001; 2001US-00948993.
25-OCT-2001; 2001US-0342923P.
08-FEB-2002; 2002US-0362699P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention relates to an isolated nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-MAR-2002; 2002WO-US009107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bordetella pertussis
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Protein encoded by Prokaryotic essential gene #8461.
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                                          discovery
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Trawick JD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NLDFVPK 239
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            prokaryotic essential gene; cell proliferation; drug design.
ry programs, or for screening homologous nucleic acids proliferation in cells other than S. aureus, S. typhi
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Carr GJ,
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Forsyth
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                              K. pneumoniae or P. aeruginosa. The present sequence is encoded by one the target prokaryotic essential genes. Note: The sequence data for thi patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                             ftp.wipo.int/pub/published_pct_sequences
309
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GVGANALLRAHLARALKPLRAEAYFPPLSLCTDNGAMIAFAAAERVKAGLADLRE 363
                                                                                                                                LMGL-GYP-----GGPALARLAEQGDASRYDLPRPMLHSGDLDFSFSGLKTAVLTRV--
                                                                                                                                                             RLSLIKHPECSTMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGLQ-HVTDKIIM
                              GVASNFYIRRALEILTNATQCTLLCPPPRLCTDNGIMIAWNGIERLRAGLGILHD
                                                               KAATRDGGELGE--QDRADLAAATQAAIVEVLAAKAIRAL---KQTGL-----RRLVVAG
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                                                                                              KKEKEEGIEKGQILSSAADIAATVQHTMACHLVKRTHRAILFCKQRDLLPQNNAVLVASG
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Pred. No. 5.6e-27;
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                                                                                                                                                                                                                                                                                             Length 382;
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Search completed: November 10, 2005, 16:48:02 Job time : 72.9739 secs

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Minimum
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1: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*

2: /cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*

3: /cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*

4: /cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*

5: /cgn2_6/ptodata/1/pubpaa/US08_NEW_PUB.pep:*

6: /cgn2_6/ptodata/1/pubpaa/US08_NEW_PUB.pep:*

7: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*

8: /cgn2_6/ptodata/1/pubpaa/US09A_PUBCOMB.pep:*

9: /cgn2_6/ptodata/1/pubpaa/US09A_PUBCOMB.pep:*

10: /cgn2_6/ptodata/1/pubpaa/US09A_PUBCOMB.pep:*

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14: /cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep:*

15: /cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep:*

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18: /cgn2_6/ptodata/1/pubpaa/US11A_PUBCOMB.pep:*

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US-10-649-273-22

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US-10-649-273-19

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US-10-651-722-19
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Sequence 22, Appl
Sequence 22, Appl
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Sequence 2, Appli
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Sequence 19, Appli
Sequence 19, Appli
Sequence 19, Appli
Sequence 19, Appli
Sequence 5, Appli
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## ALIGNMENTS

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US-10-067-443-22

Sequence 22, Application US/10067443

; Sequence 22, Application US20030082782A1

; Publication No. US20030082782A1

; GENERAL INFORMATION:
    APPLICANT: Bristol-Myers Squibb Company
    TITLE OF INVENTION: SPINAL CORD, MP-1

FILE OF INVENTION: SPINAL CORD, MP-1

FILE REFERENCE: D0073 NP
    CURRENT APPLICATION NUMBER: US/10/067,443

; CURRENT APPLICATION NUMBER: US 60/266,518

PRIOR APPLICATION NUMBER: US 60/266,518

PRIOR FILING DATE: 2001-04-10

NUMBER: OF SEQ ID NOS: 71

PRIOR FILING DATE: 2001-04-10

NUMBER: OF SEQ ID NOS: 71
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TYPE: PRT
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APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A N
FILE REFERENCE: D0073 CNT
CURRENT APPLICATION NUMBER: US/10/649,273
CURRENT FILING DATE: 2003-08-27
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 10/067,443
PRIOR APPLICATION NUMBER: US 10/067,443
PRIOR FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR PILING DATE: 2001-04-10
NUMBER: OF SEQ ID NOS: 71
SOFTWARE: PatentIn version 3.2
SEQ ID NO 22
LENGTH: 267
TYPE: PAT
ORGANISM: homo sapiens
US-10-649-273-22
RESULT 3
US-10-651-722-22
; Sequence 22, Application US/10651722
; Publication No. US20040048302A1
; GENERAL INFORMATION:
; APPLICANT: Bristol-Myers Squibb Company
; TITLE OF INVENTION: POLYNUCLECTIDE ENCODING A NOVEL METALOPROTEASE,
; FILE REFERENCE: DOO73 DIV
; CURRENT APPLICATION NUMBER: US/10/651,722

~**TRRENT FILING DATE: 2003-08-29
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Sequence 2, Application US/10067443
; Sequence 2, Application US/10067443
; GENERAL INFORMATION:
    TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOTIFIE OF INVENTION: SPINAL CORD, MP-1
; FILE REFERENCE: DO073 NP
; CURRENT APPLICATION NUMBER: US/10/067,443
; CURRENT APPLICATION NUMBER: US 60/266,518
; PRIOR APPLICATION NUMBER: US 60/262,814
; PRIOR APPLICATION NUMBER: US 60/282,814
; PRIOR APPLICATION NUMBER: US 60/282,814
; PRIOR FILING DATE: 2001-04-10
; SOFTWARE: PATE IN OS: 71
; SOFTWARE: PATE IN OS: 71
; SOFTWARE: PATE IN OS: 71
; SOFTWARE: PATE IN OS: 71
; CREANISM: Homo sapiens
US-10-067-443-2
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; TYPE: PRT
; ORGANISM: homo s
US-10-651-722-22
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                                                                                                                                  Query Match 100.0%; Score 1385; DB 14; Best Local Similarity 100.0%; Pred. No. 4.2e-139; Matches 267; Conservative 0; Mismatches 0;
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PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 10/067,443
PRIOR FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
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RESULT 6
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CURRENT FILING DATE: 2003-08-27
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 10/067,443
PRIOR FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOFTWARE: Patentin version 3.2
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US-10-649-273-2
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Sequence 2, Application US/10651722
Publication No. US20040048302A1
GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLECTIDE ENCODING A NOVEL METALOPROTEASE,
FILE REPERENCE: DOO'3 DIV
CURRENT APPLICATION NUMBER: US/10/651,722
CURRENT FILING DATE: 2003-08-29
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LENGTH: 414
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Matches 267;
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TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE,
FILE REFERENCE: D0073 CNT
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ORGANISM: Homo sapiens
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No. US20040043407A1
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APPLICANT: HONCHELL, CYNTHIA D.; NGIYEN, Danniel B.;
APPLICANT: HUNCHELL, CYNTHIA D.; NGIYEN, Danniel B.;
APPLICANT: LU, Dyung Aina M.; LEE, Ernestine A.;
APPLICANT: YUE, Henry; FORSYTHE, Ian J.;
APPLICANT: HARROSO, Ines; RAMKUMAR, Jayalaxmi;
APPLICANT: GRIFFIN, Jennifer A.; LI, Joana X.;
APPLICANT: YANG, Junming THANGAVELU, Kavitha;
APPLICANT: HANGON, Patricla M.; GURURAJAN, Rajagopal;
APPLICANT: HASON, Patricla M.; GURURAJAN, Rajagopal;
APPLICANT: LEE, Sally; BECHA, Shanya D.;
APPLICANT: LEE, Sally; BECHA, Shanya D.;
APPLICANT: LEE, Soo Yeun; TRAN, Uyen K.;
APPLICANT: LEILIOTT, VICKI S.; LUO, Wen;
APPLICANT: LILIOTT, VICKI S.; LUO, Wen;
APPLICANT: LU, Yan; ZEBAAJADIAN, Yeganeh
TITLE OF INVENTION: PROTEIN MODIFICATION AND MAINTENANCE MOLECULES
FILE REFERENCE: PF-1040 USN
CURRENT FILING DATE: 2003-12-16
PRIOR APPLICATION NUMBER: US/10/480,988
CURRENT FILING DATE: 2001-06-22
PRIOR APPLICATION NUMBER: US 60/300,508
PRIOR PILING DATE: 2001-07-06
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 8, Application US/10480988 Publication No. US20050069877A1
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APPLICANT: SWARNAKAR, Anita; HARLIA, April J.A.;
APPLICANT: TRAN, Bao; DUGGAN, Brendan M.;
APPLICANT: WARREN, Bridget A.; ISON, Craig H.;
APPLICANT: HONCHELL, Cynthia D.; NGUYEN, Danniel |
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PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 10/067,443
PRIOR FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
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Sequence 19, Application US/10067443

Publication No. US20030082782A1

GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
ITILE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED I
ITILE OF INVENTION: SPINAL CORD, MF-1

FILE REFERENCE: DO073 NP

CURRENT APPLICATION NUMBER: US/10/067,443

CURRENT APPLICATION NUMBER: US/02-05-05

PRIOR APPLICATION NUMBER: US 60/266,518

PRIOR FILING DATE: 2001-02-05

PRIOR APPLICATION NUMBER: US 60/282,814

PRIOR FILING DATE: 2001-04-10

NUMBER OF SEQ ID NOS: 71

SOPTWARE: Patentin version 3.0

SEQ ID NO 19

LENGTH: 439

TYPE: PRT
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PRIOR FILING DATE: 2001-07-13
PRIOR PPLICATION NUMBER: US 60/311,442
PRIOR PILING DATE: 2001-08-09
PRIOR APPLICATION NUMBER: US 60/314,821
PRIOR PILING DATE: 2001-08-24
PRIOR PILING DATE: 2001-08-24
PRIOR PILING DATE: 2001-08-29
PRIOR PILING DATE: 2001-08-29
PRIOR PILING DATE: 2001-08-29
PRIOR PILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: US 60/378,205
PRIOR PILING DATE: 2002-05-03
NUMBER OF SEQ ID NOS: 56
SOPTWARE: PERL Program
SEQ ID NO 8
LENGTH: 414
TYPE: PRT
ORGANISM: Homo sapiens
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US-10-067-443-19
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                                                                              ; ORGANISM: homo sapiens
US-10-067-443-19
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 Matches
                   Query Match
Best Local Similarity
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NAME/KEY: misc_feature
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                     98.1%;
91.1%;
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                 Score 1358.5; DB 1
Pred. No. 3.2e-136;
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Pred. No. 4.2e-139;
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Sequence 19, Application US/10649273

Sequence 19, Application US/20040043407A1

GENERAL INFORMATION: POLYNUCLEOTIDE ENCODING A N
FILE REFERENCE: D0073 CNT
CURRENT APPLICATION NUMBER: US/10/649,273

CURRENT FILING DATE: 2003-08-27

PRIOR APPLICATION NUMBER: US 60/266,518

PRIOR PILLING DATE: 2001-02-05

PRIOR PILLING DATE: 2002-05

PRIOR APPLICATION NUMBER: US 10/067,443

PRIOR PILLING DATE: 2001-04-10

NUMBER OF SEQ ID NOS: 71

SOFTWARE: Patentin version 3.2

INVERSE OF SEQ ID NOS: 71

SOFTWARE: Patentin version 3.2
                                                                                                                                                                                                                                                                                                                                                                                                                                      ; LENGTH: 439
; TYPE: PRT
; ORGANISM: homo sapiens
US-10-649-273-19
RESULT 10
US-10-651-722-19
; Sequence 19, A)
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US-10-649-273-19
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Pred. No. 3.2e
0; Mismatches
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Application US/10651722

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Sequence 5, Application US/10012140
Publication No. US2003009017A1
GENERAL INFORMATION:
APPLICANT: Leiby, Kevin R.
APPLICANT: Kapeller-Libermann, Rosana
APPLICANT: Kapeller-Libermann, Rosana
APPLICANT: Glucksmann, Maria A.
ITITLE OF INVENTION: 14354 METHODS AND COMPO.
TITLE OF INVENTION: 14354 METHODS AND COMPO.
TITLE OF INVENTION: THEREOF
FILE REFERENCE: 381552004900
CURRENT APPLICATION NUMBER: US/10/012,140
CURRENT FILING DATE: 2001-11-08
PRIOR APPLICATION NUMBER: 60/246,768
PRIOR FILING DATE: 2000-11-08
PRIOR APPLICATION NUMBER: 60/246,772
PRIOR APPLICATION NUMBER: 60/249,185
PRIOR APPLICATION NUMBER: 60/249,185
PRIOR FILING DATE: 2000-11-15
NUMBER OF SEQ ID NOS: 49
SOFTWARE: FRSEUSEQ for Windows Version 4.0
SEQ ID NO 5
SEQ ID NO 5
LENGTH: 414
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PRIOR FILING DATE: 2001-02-05
PRIOR PPLICATION NUMBER: US 10/067,443
PRIOR FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOFTMARE: Patentin version 3.2
SEQ ID NO 19
LENGTH: 439
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ORGANISM: Homo sapiens -10-012-140-5
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TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE, MP-1
FILE REFERENCE: D0073 DIV
CURRENT APPLICATION NUMBER: US/10/651,722
CURRENT FILING DATE: 2003-08-29
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                                           TYPE: PRT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       156 RAILFCKORDLLPONNAVLVASGGVASNFYIRRALEILTNATOCTILCPPPRICTDNGIM 215
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Pred. No. 3.2e-136;
0; Mismatches 1;
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; ORGANISM: Homo
US-10-094-749-2039
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US-10-094-749-2039
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APPLICANT: MASUHO, YASUHIKO
TITLE OF INVENTION: NOVEL FULL-LENGTH CDNA
FILE REFERENCE: 084335/010
CURRENT APPLICATION NUMBER: US/10/094,749
CURRENT FILING DATE: 2002-03-12
PRIOR APPLICATION NUMBER: 60/350,435
PRIOR FILING DATE: 2002-01-24
PRIOR APPLICATION NUMBER: JP 2001-328381
PRIOR PILING DATE: 2001-09-14
NUMBER OF SEQ ID NOS: 3381
                                                                                                                                                          SOPTWARE: Patentin Ver.
SEQ ID NO 2039
LENGTH: 364
                                                      Best Local Similarity 98.0 Matches 214; Conservative
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Best Local Similarity
Matches 260; Conserv
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                                                                                    Query Match
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APPLICANT:
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APPLICANT: SUGIYI
APPLICANT: OTSUKI
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                                                                                                                                                        LENGTH:
 148
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1 MEAHALTIRLTNKVEFPFLVLLISGGHCLLALVQGVSDFLLLGKSLDIAPGDMLDKVARR
                                                                                                                                                                                                                                                                                                                                                          OTSÚKA, KAORU
NAGAI, KEIICHI
IRIE, RYOTARO
TAMECHIKA, ICHIRO
SEKI, NAOHIKO
YOSHIKAWA, TSUTOMU
OTSUKA, MOTOYUKI
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SATO, HIROYUKI
ISHII, SHIZUKO
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                                                                  79.8%;
98.6%;
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                                                      Score 1105; DI
Pred. No. 3.4e:
0; Mismatches
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Pred. No. 3.9e-135;
                                                        .4e-109;
les 3;
                                                                                    DB 15;
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Sequence 34191, Application US/11097143

Publication No. US20050208558A1

GENERAL INFORMATION:
APPLICANT: Venter, J. Craig
APPLICANT: et al.
TITLE OF INVENTION: DETECTION KIT, SUCH AS NUITILE OF INVENTION: DROSOPHILA GENES.
FILE REFERENCE: CL000728
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Publication No. US20040031072A1
GENERAL INFORMATION:
APPLICANT: La Rosa Thomas J
APPLICANT: Kovalic David K
APPLICANT: Chou Yihua
APPLICANT: Cao Yongwei
TITILE OF INVENTION: Soy Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21(5322)B
CURRENT APPLICATION NUMBER: US/10/424,599
CURRENT FILING DATE: 2003-04-28
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Best Local Similarity
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SEQ ID NO 209259
LENGTH: 445
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ORGANISM: Glycine
FEATURE:
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                                        NUCLEIC ACID
EXPRESSION OF 10,000 OR
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PRIOR APPLICATION NUMBER: 60/157,832
PRIOR FILING DATE: 1999-10-05
PRIOR PELION DATE: 1999-10-19
PRIOR PELION NUMBER: 60/160,191
PRIOR PELION NUMBER: 60/161,932
PRIOR PELION DATE: 1999-10-28
PRIOR PELION DATE: 1999-10-28
PRIOR APPLICATION NUMBER: 60/164,769
PRIOR APPLICATION NUMBER: 60/173,383
PRIOR PILING DATE: 1999-11-28
PRIOR APPLICATION NUMBER: 60/175,693
PRIOR PILING DATE: 1999-12-28
PRIOR PELION DATE: 2000-01-12
PRIOR PELION DATE: 2000-01-12
PRIOR APPLICATION NUMBER: 60/184,831
PRIOR PILING DATE: 2000-02-24
PRIOR APPLICATION NUMBER: 60/191,637
PRIOR PILING DATE: 2000-03-23
PRIOR PILING DATE: 2000-03-23
PRIOR PILING DATE: 2000-03-23
PRIOR PILING DATE: 2000-03-23
PRIOR PILING DATE: 2000-03-23
US-10-067-443-3
                                                              SOFTMAN
; SEQ ID NO 3
                                                                                                                                                                                                                                                                                                        Sequence 3, Application US/10067443
Publication No. US20030082782A1
GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED
TITLE OF INVENTION: SPINAL CORD, MP-1
FILE REFERENCE: D0073 NP
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SOFTWARE: FastSEQ for Windows Version
SEQ ID NO 34191
LENGTH: 409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                               CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
                                                                                                                  NUMBER OF SEQ ID NOS: 71
SOFTWARE: PatentIn version 3.0
              LENGTH: 463
TYPE: PRT
ORGANISM: Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: DROSOPHILA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Match 30.0%; Score A15.5; DB 20; Local Similarity 38.2%; Pred.;No. 2.7e-35; les 100; Conservative 43; Mismatches 104;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               370 ASTRYDYD---SIDIOGSAGFA 388
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•15

Query Best : Match	Query Match 29.6%; Score 409.5; DB 14; Length 463; Best Local Similarity 36.6%; Pred. No. 1.4e-34; - Matches 100; Conservative 37; Mismatches 91; Indels 45; Gaps
Ş	1 MEAHALTIRLT-NKVEFPFLVLLISGGHCLLALVQGVSDFLLLGKSLDIAPGDMLDKVAR 59
Db	192 MEAHALVARLVEQELSFPFMALLISGGHNLLVLAHKLGQYTQLGTTVDDAIGEAFDKTAK 251
γQ	60 RLSLIKHPECSTMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGLQHVTDKIJMK 119
DЪ	252 WLGLDMHRSGGPAVEELALEGDAKSVKFNVPMKYHKDCNFSYAGLKTQVRLAIEA 306
δ	120 KEKEEGIEKGQILSSAADIAATVQHTMACHLVKRTHRAILFCKQRDLLPQNNAVLVASGG 179
DЪ	307 KEIRNRADIAASFQRVAVLHLEEKCERAIDWALELEPSIKHMVISGG 353
γ	180 VASNEYIRRALEILTNATQCTLLCPPPRLCTDNGIMIAWNGIERLRAGLGILHDIEGIRY 239
DЪ	354 VASNKYVRLRLNNIVENKNLKLVCPPPSLCTDNGVMVAWTGLEHFRVGRY 403
Ş	240 EPKCPLGVDISKEVGEA 256
DЪ	404 DPPPPATEPEDYVYDLRPRWPLGEEYAKGRSEA 436

Search completed: November 10, 2005, 16:58:51 Job time: 71.5228 secs

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Result
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DB DB
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                                                                                                                                                                                                                                                                                 Query
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1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
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1385
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Listing first
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(c) 1993 - 2005 Compugen Ltd
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probable o-sialog	Н70737	4	34	15.6	215.5	45
O-sialoglycoprotei	C71215		32	15.6	215.5	44
QRI7 protein - yea	S50740		40	15.6	216	43
hypothetical prote	2 G89996		34	15.7	217	42
O-sialoglycoprotei	B86515	2	34	15.7	218	41
o-sialoglycoprotei	<b>9 Н72106</b>		34	15.7	218	40
probable glycoprot	E81278		33	15.8	219	39
O-sialoglycoprote	. н69056	À	53	15.8	219.5	38
probable o-sialog	A71545	œ	338	15.9	220	37
o-sialoglycoprote	F75029		32	16.1	222.5	36
O-sialoglycoprote	2 G86661	6 2	34	16.6	229.5	35
glycoprotein endop	2 AB1705		34	16.7	231	34
O-sialoglycoprotei	2 G69388	2	32	16.8	233	33
O-sialoglycoprotei	E84936		ω S	17.1	236.5	32
probably O-sialog	2 B97011	0	34	17.1	237.5	31
glycoprotein endop	AC1334	4	34	17.3	239.5	30

### ALIGNMENTS

δ ð A;Status: preliminary A;Molecule type: DNA A;Residues: 1-463 <STO> C;Accession: E84888

R;Lin, X.; Kaul, S.; Rounsley, S.D.; Shea, T.P.; Benito, M.I.; Town, C.D.; Fujii, C.Y.; M.; Koo, H.; Moffat, K.S.; Cronin, L.A.; Shen, M.; Vanken, S.E.; Umayam, L.; Tallon, L. euss, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, J ર્શ 몆 밁 밁 S 문 S A;Gene: At2g45270 A;Map position: 2 C;Superfamily: O-sialoglycoprotein endopeptidase A;Cross-references: GB:AE002093; NID:g2583127; PIDN:AAB82636.1; GSPDB:GN00139 Nature 402, 761-768, 1999 A;Title: Sequence and analysis of chromosome 2 of the plant Arabidopsis thaliana. A;Reference number: A84420; MUID:20083487; PMID:10617197 A;Accession: E84888 probable O-sialoglycoprotein endopeptidase [imported] - Arabidopsis thaliana C;Species: Arabidopsis thaliana (mouse-ear cress) C;Date: 02-Feb-2001 #sequence\_revision 02-Feb-2001 #text\_change 02-Jun-2003 Query Match 29.6%; Score 409.5; DB 2; Best Local Similarity 36.6%; Pred. No. 5.1e-29; Matches 100; Conservative 37; Mismatches 91; Genetics: 240 404 354 307 252 180 120 192 60 1 MEAHALTIRLT-NKVEFPFLYLLISGGHCLLALVQGVSDFLLLGKSLDIAPGDMLDKVAR 59 VASNFYIRRALBILTNATQCTLLCPPPRLCTDNGIMIAWNGIBRLRAGLGILHDIBGIRY 239 DPPPPATEPEDYVYDLRPRWPLGEEYAKGRSEA KEKEEGIEKGQILSSAADIAATVQHTMACHLVKRTHRAILFCKQRDLLPQNNAVLVASGG 179 B-----PKCPLGVDISKEVGEA 256 WLGLDMH-----RSGGPAVEELALEGDAKSVKFNVPMKYHKDCNFSYAGLKTOVRLAIEA RLSLIKHPECSTMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMK 119 MEAHALVARLVEQELSFPFMALLISGGHNLLVLAHKLGQYTQLGTTVDDAIGEAFDKTAK KB-----IRNRADIAASFQRVAVLHLEEKCERAIDWALE---LEPSIKHWVISGG Indels Length 463; 45; Gaps 306 353 251

RESULT AB2902

O-sialoglycoprotein endopeptidase gcp [imported] - Agrobacterium tumefacien C;Species: Agrobacterium tumefaciens C;Date: 11-Jan-2002 #sequence\_revision 11-Jan-2002 #text\_change 18-Nov-2002 Agrobacterium tumefaciens (strain C58

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C;Accession: AB2902
R;Wood, D.W.; Setubal, J.C.; Kaul, R.; Monks, D.; Chen, L.; lerage, G.; Gillet, W.; Grant, C.; Guenthner, D.; Kutyavin, T.; Karp, P.; Romero, P.; Zhang, S.; Science 294, 2317-2323, 2001
A.Anthors: Yoo, H.; Tao, Y.; Biddle, P.; Jung, M.; Krespan,
   밁
                                                                                                                                                                                                      A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-366 <KUR>
A;Residues: 1-366 <KUR>
A;Cross-references: GB:AE007869; PIDN:AAK88373.1;
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Gene: gcp
A;Map position: circular chromosome
C;Superfamily: O-sialoglycoprotein endopeptidase
                                                                                                                                                                                                                                                                                                                                                                                                           probable o-sialoglycoprotein endopeptidase (glycoproteinase) [imported] - A. C;Species: Agrobacterium tumefaciens C;Date: 30-Sep-2001 #sequence_revision 30-Sep-2001 #text_change 18-Nov-2002 C;Accession: D97677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: GB:AE008688; 1
A;Experimental source: strain C58
C;Genetics:
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                                                                                                                                                                                                                                                                                                A;Title: Genome Sequence of the Plant Pathogen and Biotechnology A;Reference number: A97359; MUID:21608551; PMID:11743194 A;Accession: D97677
                                                                                                                                                                                                                                                                                                                                                 R;Goodner, B.; Hinkle, G.; Gattung, A.; Liu, F.; Wollam, C.; Allinger, Science 294, 2323-2328, 2001
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A; Residues: 1-365 < KUR>
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                                                                                                                                                 Superfamily: O-sialoglycoprotein endopeptidase
                                                                                                                                                                    Map position:
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                     MEAHALTIRLTNKVEFPFLVLLISGGHCLLALVQGVSDFLLLGKSLDIAPGDMLDKVARR
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LEGHALTARLTDGLSFPYLMLLVSGGHTQLVLVRGVGEYERWGTTIDDALGEAFDKTAKL
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                                                                                                                                                                      circular chromosome
                                                                          Conservative
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                                                                                         24.4%; Score 338; DB 2; 34.9%; Pred. No. 1.1e-22;
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8 (Dupont)
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Pred. No. 1.1e-22;
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Doughty, D.; Scott, C.; Lappas,
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                                                                          98;
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[.; Levy, R.;
                                                                                                                                                                                                                                                                                                                                                                        M.; Qurollo,
; Lappas, C.;
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; Markelz,
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A;Title: The genome sequence of Rickettsia prowazekii and A;Reference number: A71630; MUID:99039499; PMID:9823893 A;Accession: E71711
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A;Cross-references: UNIPROT:Q9ZEA8; GB:AJ235270;
A;Experimental source: strain Madrid E
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PYGYRLIAPPMHLCTDNAAMIAYAGLER
                                                                              ATOCTLLCPPPRLCTDNGIMIAWNGIER 223
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C.Species: Brucella melitensis
C.Species: Brucella melitensis
C.Date: 01-Feb-2002 #sequence\_revision 01-Feb-2002 #text\_change 15-Feb-2002
C;Date: 01-Feb-2002 #sequence\_revision 01-Feb-2002 #sequence\_revision 01-Feb-2002
C;Date: 01-Feb-2002 #sequence\_revision 01-Feb-2002 #sequence\_revision 01-Feb-2002
C;Date: 01-Feb-2002 #sequence\_revision 01-Feb-2002 #sequence\_revision 01-Feb-2002
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C;Date: 01-Feb-2002 #sequence\_revision 01-Feb-2002
C;Date: 01-Feb-2002 #sequence\_revision 01-Feb-

.; Mazur, M.; Goltsman, E.; Selkov, E.; Elzer, P.H.; Hagius, S.; O'Callaghan, D.; Letess Proc. Natl. Acad. Sci. U.S.A. 99, 443-448, 2002 A;Title: The genome sequence of the facultative intracellular pathogen Brucella melitens

RESULT 5 AB3274

O-sialoglycoprotein endopeptidase (EC C; Species: Brucella melitensis

3.4.24.57)

[imported] - Brucella melitensis (strai

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A; Residues: 1-344 < KUR>
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R;Ogata, H.; Audic, S.; Renesto-Audiffren, P.; Fournier, P.E.; Barbe, V.; Samson, Science 293, 2093-2098, 2001
Science 293, 2093-2098 and Rickettsia conorii and Rickettsia prowazekii. A;Title: Mechanisms of Evolution in Rickettsia conorii and Rickettsia prowazekii. A;Reference number: A97700; MUID:21442074; PMID:11557893
A;Accession: E97707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             O-sialoglycoprotein endopeptidase (EC 3.4.24.57) [imported] - Rickettsia co C;Species: Rickettsia conorii C;Date: 30-Sep-2001 #sequence_revision 30-Sep-2001 #text_change 22-Oct-2001
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C;Superfamily: O-sialoglycoprotein endopeptidase
C;Keywords: hydrolase; metalloproteinase
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A;Cross-terences: GB:AE008917; PIDN:AAL51357.1; PID:g17982056; GSPDB:GN00190 A;Experimental source: strain 16M C;Genetics: A;Experimental source: strain 16M C;Genetics: A;Gene: BMEI0175
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A;Accession: AB3274
A;Status: preliminary
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Matches 81
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                                       179 GVASNFYIRRALEILTNATQCTLLCPPPRLCTDNGIMIAWNGIER 223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 175 VASGGVASNFYIRRALEILTNATQCTLLCPPPRLCTDNGIMIAWNGIER 223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           229 VPLTDQ-------DVTDICASFQAAVADTLSDRVGRSLERFKTE--FPDCATPSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 116 IIMKKEKEEGIEKGQILSSAADIAATVQHTMACHLVKRTHRAILFCKQRDLLPQ-NNAVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      116 LEGHALTARLTDGLPFPYLLLLVSGGHTQMVLVRGIGDYERLGTTIDDALGEAFDKTAKL
                                                                                                                                                                                                      61 LSLIKHPECSTMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMK- 119
                                                                                                                                                                                                                                                                                                                                81;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 LSLIKHPECSTMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGL----QHVTDK 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          86;
                                                                                                                                                                                                                                                                         1 MEAHALTIRLINKVEFPFLVLLISGGHCLLALVQGVSDFLLLGKSLDIAPGDMLDKVARR 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MEAHALTIRLTNKVEFPFLVLLISGGHCLLALVQGVSDFLLLGKSLDIAPGDMLDKVARR 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                          LEGHALTARLIDNIPYPYLLLLASGGHCQFVAVLGLGKYKILGSTIDDAVGEAFDKVAKM
GVAANKYLQKILSSCAKTYGYRLIYPPIHLCTDNAAMIAYAGLER
                                                                                                                       KEKEEGIEKGQILSSAADIAATVQHTMACHLVKRTHRAILFCKQ-RDLLPQNNAVLVASG 178
                                                                                                                                                                 LNL----AFPGGPEIEKRAKLGDPHKYKFPKPIINSGNCNMSFSGLKTAVRTLIMTL
                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                              23.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24.2%; Score 334.5; DB 2
37.6%; Pred. No. 2.2e-22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGPAVERMALQGDQKRFALPRPLKGEARLDFSFSGLKTAVRQTATEL
                                                                                   -INDIAASFQFTIGEILSSKVQDAIRAYEQITNNFDKKN--IVIAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PMID:11756688
                                                                                                                                                                                                                                                                                                                                40; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          33; Mismatches
                                                                                                                                                                                                                                                                                                                         Score 329.5; DB z;
Pred. No. 5.8e-22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        83;
                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rickettsia conorii
                                                                                                                                                                                                                                                                                                                                19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27;
                                                                                                                                                                                                                                                172
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (strain
                                                                                                                                                                                                                                                                                                    C;Accession: H83572
R;Stover, C.K.; Pham, X.Q.;
adman, S.; Yuan, Y.; Brody,
.; Lory, S.; Olson, M.V.
Nature 406, 959-964, 2000
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                                                                                                                         C; Genetics:
                                                                                                                                                                                      A; Residues: 1-341 <STO>
                                                                                                                                                                                                    A; Molecule type: DNA
                                                                                                                                                                                                                       A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        H83572
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A;Molecule type: DNA
A;Residues: 1-367 <STO>
                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
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Best Local
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  Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTDD-----
  Conservative
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A;Title: Complete genome sequence of Pseudomonas aeruginosa PA01, A;Reference number: A82950; MUID:20437337; PMID:10984043 A;Accession: H83572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R;Nierman, W.C.; Feldblyum, T.V.; Paulsen, I.T.; Nelson, K.E.; Eisen, J.; Heidelberg, J. B.; Laub, M.T.; DeBoy, R.T.; Dodson, R.J.; Durkin, A.S.; Gwinn, M.L.; Haft, D.H.; Kolon n, J.; Ermolaeva, M.; White, O.; Salzberg, S.L.; Shapiro, L.; Venter, J.C.; Fraser, C.M. Proc. Natl. Acad. Sci. U.S.A. 98, 4136-4141, 2001
A;Title: Complete Genome Sequence of Caulobacter crescentus. A;Reference number: A87249; MUID:21173698; PMID:11259647
A;Accession: F87257
                                                                                                             A;Gene: gcp; PA0580
C;Superfamily: O-sialoglycoprotein endopentidase
                                                                                                                                                                                                 A;Cross-references: GB:AE004494; (A;Experimental source: strain PAO)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Date: 15-Sep-2000 #sequence_revision 15-Sep-2000 #text_change 31-Dec-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        O-sialoglycoprotein endopeptidase PA0580 [imported] - C;Species: Pseudomonas aeruginosa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Gene: CC0071
C;Superfamily: O-sialoglycoprotein endopeptidase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Cross-references: GB:AE005673; NID:g13421168; PIDN:AAK22058.1; GSPDB:GN00148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C;Date: 20-Apr-2001 #sequence_revision 20-Apr-2001 #text_change 10-May-2001
C;Accession: F87257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 peptidase M22 family protein [imported] - Caulobacter crescentus
C;Species: Caulobacter crescentus
                            y Match 21.0%;
Local Similarity 35.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       184 LGL-PYP-----GGPALEKLAVGGDPTRYALPRALLGRKDCDFSFSGLKTAAARIAETL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  124 LEGHAVSARLGADIAYPFLLLLVSGGHCQLLEVSGVGACKRLGTTIDDAAGEAFDKIAKS 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AANGAVRAALLADCEKNGFSFAAPPLAYCTDNAAMIALAGAERL--ALGIFDDLDAIA-R 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ASNFYIRRALEILTNATQCTLLCPPPRLCTDNGIMIAWNGIERLRAGIGILHDIEGIRYE 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EKEEGIEKGQILSSAADIAATVQHTMACHLVKRTHRAILFCKQRDLLPQNNAVLVASGGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LSLIKHPECSTMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23.6%; Score 326.5; DB 2; 36.3%; Pred. No. 1.2e-21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -ARRDLAAGVQAAIARQLSERVDRAMKLYK--DSHDPEDLRFVVAGGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Erwin,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                36;
37; Mismatches
                                                                                                                                                                                                                              GB:AE004091; NID:g9946446; PIDN:AAG03969.1; GSPDB:GN001
                            Score 291.5; DB 2
Pred. No. 1.5e-18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Coulter, S.N.; Folger, K.R.; Kas,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
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  Indels
                                                      Length
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                                                         341;
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23;
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  Gaps
                                                                                                                                                                                                                                                                                                                                                                                               opportunistic
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Larbig,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             285
9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                M.J.; Br
K.; Lim,
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O-sialoglycoprotein endopeptidase (EC 3.4.24.57) - N; Alternate names: sialoglycoproteinase C; Species: Haemophilus influenzae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Title: The complete genome of the hyperthermophilic bacterium Aquifex aeolicus. A;Reference number: A70300; MUID:98196666; PMID:9537320
A;Recession: G70369
A;Retession: preliminary; nucleic acid sequence not shown; translation not shown A;Molecule type: DNA
A;Residues: DNA
A;Residues: 1-335 <AOF>
A;Cross-references: UNIPROT:066986; GB:AE000708; NID:g2983356; PIDN:AAC06951.1; PA;Experimental source: strain VF5
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sialoglycoproteinase - Aquifex aeolicus
C;Species: Aquifex aeolicus
C;Date: 08-May-1998 #sequence_revision 08-May-1998 #text_change 09-Jul-2004
C;Date: 08-May-1998 #sequence_revision 08-May-1998 #text_change 09-Jul-2004
C;Datesion: G70369
R;Deckert, G.; Warren, P.V.; Gaasterland, T.; Young, W.G.; Lenox, A.L.; Grav.
V.
                                                              H64074
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Gene: gcp
C;Superfamily: O-sialoglycoprotein endopeptidase
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                                                                                  RESULT 10
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Best Local S
Matches 85
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 EKEEGIEKGQILSSAADIAATVOHTMACHLVKRTHRAILFCKQRDLLPQNNAVLVASGGV
                                                                                                                                                                                                                                                                                                                                                                                                                              61 LSLIKHPECSTMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MEAHALTIRLTNKVEFPFLVLLISGGHCLLALVQGVSDFLLLGKSLDIAPGDMLDKVARR 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
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                                                                                                                                                                                    RYEPKCPL
                                                                                                                                                                                                                         SANSRLR---EVFKKASQEYGFELYIPHPSLSTDNALMIAYAGMERFKRGVVAPLDVNP-
                                                                                                                                                                                                                                                                 ASNEYIRRALEILTNATQ----CTLLCPPPRLCTDNGIMIAWNGIERLRAGLGILHDIEGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LEGHIYSVFLEKKVEYPFLALIISGGHTDLYLVRDFGRYDFLGGTLDDAVGEAYDKVAKM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EPKCPL 245
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LIGL-GYP-----GGPEIARLAERGTPGREVFPRPMTDRPGLDFSFSGLKTFTLN-TWQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RLSLIKHPECSTMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEAHALTIRLTINK-VEFPFLVLLLISGGHCLLALVQGVSDFLLLGKSLDIAPGDMLDKVAR
                                                                                                                                                                                                                                                                                                        KKEKNVRK-----EDIAYSFQETVVEILLEKS----LWAMKKTGIKR----LVVVVGGV
                                                                                                                                                                                                                                                                                                                                                                                         LGL-GYP----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEKEEGIEKGQILSSAADIAATVQHTMACHLVKRTHRAILFCKQRDLLPQNNAVLVASGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                    245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21.0%; Score 290.5; DB 2; 34.3%; Pred. No. 1.8e-18; tive 46; Mismatches 82;
                                                                                                                                                                                                                                                                                                                                                                                         -GGPIIDRLAKEGKKL-YPLPKPLMEEGNLNFSFSGLK---TAILNLL
                                         Haemophilus influenzae (strain Rd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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R;Fleischmann, R.D.; Adams, M.D.; White, O.; Clayton, R.A.; Kirkness, E.F.; Kerlavage, A.; Gocayne, J.D.; Scott, J.; Shirley, R.; Liu, L.I.; Glodek, A.; Kelley, J.M.; Weidman, J. D.M.; Brandon, R.C.; Fine, L.D.; Fritchman, J.L.; Fuhrmann, J.L.; Geoghagen, N.S.M. Science 269, 496-512, 1995
A;Authors: Gnehm, C.L.; McDonald, L.A.; Small, K.V.; Fraser, C.M.; Smith, H.O.; Venter, A.;Title: Whole-genome random sequencing and assembly of Haemophilus influenzae Rd. A;Reference number: A64000; MUID:95350630; PMID:7542800
A;Accession: H64074
A;Status: nucleic acid sequence not shown; translation not shown
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AI0079
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               probable glycoproteinase gcp [imported] - Yersinia pestis (strain CO92) C;Species: Yersinia pestis
C;Species: Yersinia pestis
C;Date: 02-Nov-2001 #sequence_revision 02-Nov-2001 #text_change 09-Nov-C;Accession: AI0079
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A;Cross-references: UNIPROT:P43764; GB:U32735; GB:L42023; C;Superfamily: O-sialoglycoprotein endopeptidase C;Keywords: hydrolase; metalloproteinase
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A;Residues: 1-337 <KUR>
A;Cross-references: GB:AL590842; PIDN:CAC89500.1; PID:g15978736; GSPDB:GN00175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Title: Genome sequence of Yersinia pestis, the causative agent of plague. A;Reference number: AB0001; MUID:21470413; PMID:11586360 A;Accession: AI0079
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C;Superfamily:
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                                                                                                                                                                                                                                            1 MEAHALTIRL-TNKVEFPFLVLLISGGHCLLALVQGVSDFLLLGKSLDIAPGDMLDKVAR
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                                                                                                                                      RLSLIKHPECSTMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMK
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                                                                                                                                                                                         MEGHLLAPMLEENAPEPPFVALLVSGGHTQLISVTGIGEYLLLGESVDDAAGEAFDKTAK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20.9%; Score 289.5; DB 2 ilarity 35.7%; Pred. No. 2.3e-18; Conservative 30; Mismatches 95
                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #sequence_revision 02-Nov-2001 #text_change 09-Nov-2001
                                                                                                                                                                                                                                                                                       20.2%; Score 279.5; DB 2; 32.8%; Pred. No. 1.8e-17; tive 35; Mismatches 102;
                                                                                   -ĠĠPMLSRMAQQĠTVGRFTFPRPMTDRPGLDFSFSGLKTFAANTIRA
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R;Hayashi, T.; Makino, K.; Ohnishi, M.; Kurokawa, K.; Ishii, K.; Yokoyat gasawara, N.; Yasunaga, T.; Kuhara, S.; Shiba, T.; Hattori, M.; Shinagav DNA Res. 8, 11-22, 2001
A;Title: Complete genome sequence of enterohemorrhagic Escherichia coli A;Referencc number: A99629; NUID:21156231; FMID:11256796
A;Status: preliminary
                                                                                                    probable O-sialoglycoprotein endopeptidase [imported] - Escheric C.Species: Escherichia coli C;Date: 18-Jul-2001 #sequence_revision 18-Jul-2001 #text_change C;Accession: C91122 R.Hayashi, T.; Makino, K.; Ohnishi, M.; Kurokawa, K.; Ishii. K
                                                                                                                                                                                     RESULT
C91122
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Nature 413, 848-852, 2001

A;Authors: Parry, C:; Quail, M:; Rutherford, K:; Simmonds, M.;

A;Title: Complete genome sequence of a multiple drug resistant

A;Reference number: AB0502; MUID:21534947; PMID:11677608

A;Accession: AG0892
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C;Species: Salmonella enterica subsp. enterica serovar Typhi
A;Note: this species has also been called Salmonella typhi
C;Date: 09-Nov-2001 #sequence_revision 09-Nov-2001 #text_change
C;Accession: AG0892
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A;Molecule type: DNA
A;Residues: 1-337 <PAR>
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AG0892
A;Status: preliminary A;Molecule type: DNA
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C;Superfamily:
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                                                                                                         K.; Ishii, K.; Yokoyama,

    Escherichia

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                                                                                          Shinagawa,
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                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 82
                                                                                                                                                                                                                                                                                                                                                          ;Genetics:
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Matches
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A;Gene: ygjD
C;Superfamily: O-sialoglycoprotein endopeptidase
                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Cross-references: GB:AE005174; NID:g12517643; PIDN:AAG58198.1; GSPDB:GN00145; UWGP:Z44 A;Experimental source: strain O157:H7, substrain EDL933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: DNA
A; Residues: 1-337 < STO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Title: Genome sequence of enterohemorrhagic Escherichia A;Reference number: A85480; MUID:21074935; PMID:11206551 A;Accession: B85967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Residues: 1-337 <HAY>
A;Crose-references: GB:BA000007; PIDN:BAB37370.1; PID:g13363420; GSPDB:GN00154
A;Experimental source: strain O157:H7, substrain RIMD 0509952
C;Genetics:
C;Genetics:
A;Gene: ECs3947
C;Superfamily: O-sialoglycoprotein endopeptidase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Status: preliminary
                                                                                                                                                           172 LLGL-DYP-----GGPLLSKMAAQGTAGREVFPRPMTDRPGLDFSFSGLKTFAANTI--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               172 LLGL-DYP----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60 RLSLIKHPECSTMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMK
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                  KEKEEGIEKGQILSSAADIAATVQHTMACHLVKRTHRAILFCKQRDLLPQNNAVLVASGG
                                                                                                                                                                                                                                           MEGHLLAPMLEDNPPEFPFVALLVSGGHTQLISVTGIGQYELLGESIDDAAGEAFDKTAK
                                                                                                                                                                                                                                                                MEAHALTIRL-TNKVEFPFLVLLISGGHCLLALVQGVSDFLLLGKSLDIAPGDMLDKVAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RPRWPL
                                                                                --RDNGTDD---
                                                                                                                                                                                                  RLSLIKHPECSTMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMK
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VSANRTLRAKLAEMMKKRRGEVFYARPEFCTDNGAMIAYAGMVRFKA--GATADL-GVSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VSANRTLRAKLAEMMKKRRGEVFYARPEFCTDNGAMIAYAGMVRFKA--GATADL-GVSV
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEKEEGIEKGQILSSAADIAATVQHTMACHLVKRTHRAILFCKQRDLLPQNNAVLVASGG
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                                                                                                                                                                                                                                                                                                                                         20.1%; Score 278.5; DB 2; 33.3%; Pred. No. 2.2e-17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20.1%; Score 278.5; DB 2; 33.3%; Pred. No. 2.2e-17; tive 36; Mismatches 101;
                                                                              -QTRADIARAFEDAVVDTLMIKCKRAL-----DLTGFKR--LVMAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -QTRADIARAFEDAVVDTLMIKCKRAL-----DLTGFKR--LVMAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -GGPLLSKMAAQGTAGREVEPRPMTDRPGLDFSFSGLKTFAANTI--
                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                        101;
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Potamousis,
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  325
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K.; Aj
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R;Matthews, L.
Search completed: November 10, 2005, 16:53:08 Job time : 17.5424 secs
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A;Introns: 31/2; 72/3; 122/2; 177/1; 272/3; 315/1; 353/2
C;Superfamily: O-sialoglycoprotein endopeptidase
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A;Gene: CESP:C01G10.10
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A;Molecule type: DNA
A;Residues: 1-421 <WIL>
A;Cross-references: EMBL:281030; PIDN:CAB02716.1; GSPDB:GN00023; CESP:C01G10.10
A;Experimental source: clone C01G10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         submitted to the EMBL Data Library, October 1996 A;Reference number: Z19027 A;Accession: T18825
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 19.9%; Score 276; DB 2; Length 421; Best Local Similarity 30.4%; Pred. No. 5e-17; Matches 85; Conservative 52; Mismatches 107; Indels 36; Gaps
                                                                                                                                                                              303
                                                                                   357
                                                                                                                                 237
                                                                                                                                                                                                                                                                                                                                                                                                                                        177
                                                                                                                                                                                                                                                                253 RLRKNSETSID-----IPDFCASLQNTVARHISSKLHIFFESLSEQEKLPKQ---LVI 302
                                                                                                                                                                                                                                                                                      117 IMKKEKEEGIEKGQILSSAADIAATVQHTMACHLVKRTHRAILFCKQRDLLPQNNAVLVA 176
                                                                                                                                                                                                                                                                                                                                                    194 QLGDL-GSEFDGIHVGAAVEILASRASADGHLRYPIFLPNVPKANMNFDQIKGSYLNLLE 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240 EPKCPL 245
                                                                                                                                                                                                                                                                                                                                                                                          60 RLSLIKHPECSTMSGGKAIEHLAKQGN---RFHFDIKPPLHHAKNCDFSFTGLQHVTDKI 116
                                                                                                                                                                                                            SGGVASNFYIRRALEILTNATQCTLLCPPPRLCTDNGIMIAWNGIERLRAGLGILHDIEG 236
                                                                                                                                                                            GGGVAANQYIFGAISKLSAAHNVTTIKVLLSLCTDNAEMIAYSGL-----LMLVNRSEA 356
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                                                                                        İWWRPNDIPDTIYAHARSDIĞTDASSEI----İDTPRRKL 392
                                                                                                                              IRYEP-----KCPLGVDISKEVGEASIKVPQLKM 265
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Result
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Maximum
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scoring table:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Perfect score:
  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                     1358.5
1231
1224
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1105
859
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4415.55
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356.55
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seq length: 2000000000
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Match
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                                                                                                                                                                                                                                                                                                                                 1: uniprot_sprot:*
2: uniprot_trembl:*
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 GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd
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               Q6ND54
Q8UC47
Q8UC47
Q7CWJ8
GCP_RICPR
Q8YJB1
Q8FY15
Q8FY15
Q7PAG7
Q92JK6
Q89WM1
Q93ABZ9
Q7VXN4
 Q6G1R3
Q6FCK9
                                                                                                      Q68XR3
Q93FU2
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Q98E16
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Q9VWD6
Q22145
Q73H71
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Q7Q918
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Q8JFW3
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Q9D0N0
Q6AYN7
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0944b0
06p4b0
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06p6n57
096n57
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073h71
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                                                                                     2 cowdria rum
4 rhodopseudo
7 agrobacteri
                                                                                                                                                                   homo sapien
brachydanio
brachydanio
anopheles g
                                                                                                                                                                                                                           homo sapien
homo sapien
mus musculu
                                                                                                                     wolbachia p
hizobium m
rhizobium l
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mus musculu
rattus norv
                        caulobacter
                                 bradyrhizob
                                                       brucella me
brucella su
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                                                                                                               rickettsia
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                                                                        rickettsia
                                                                                                                                                      drosophila
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45	44	43	42	41	40	39	38	37	36	35	34	ω ω	32
285.5	286.5	289.5	290.5	291.5	293	298	299.5	302	302.5	304	304.5	315.5	316.5
20.6	20.7	20.9	21.0	21.0	21.2	21.5	21.6	21.8	21.8	21.9	22.0	22.8	22.9
348	337	342	335	341	344	364	255	339	341	353	343	346	346
2	N	H	-					N					ν
Q9L7A5	Q82XN2	GCP_HAEIN	GCP_AQUAE	Q915V7	Q65RP0	Q6FYF1	Q677H2	Q6LV10	Q7NUE3	Q7VQQ9	Q9CLJ1	Q7WI34	Q7W668
Q917a5	Q82xn2	P43764	066986	Q9i5v7	Q65rp0	Q6fyf1	Q677h2	Q61v10	Q7nue3	Q7vqq9	Q9clj1	Q7wi34	Q7w668
haemophilus	nitrosomona	haemophilus	aquifex aeo	pseudomonas	mannheimia	bartonella	hyacinthus	photobacter	chromobacte	candidatus	pasteurella	bordetella	bordetella

### ALIGNMENTS

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RX Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Raha S.S., Horley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,
Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,
RA Rahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Rodriguez A.C., Grimwood J., W., Schmutz J., Myers R.M., Butterfield Y.S.,
RA Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
Vones S.J., Marra M.A.;
Vones S.J., Marra M.A.;
MEROPS, M22.004; -..
MEROPS, M22.004; -..
MEROPS, M22.004; -..
GO; GO:0008450; F:O-sialoglycoprotein endopeptidase activity; IEA.
GO; GO:0008270; F:zinc ion binding; IEA.
GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
InterPro; IPR000905; Peptidase M22.
InterPro; IPR000905; Peptidase M22.
Ffam; pPR00814; Peptidase M22 Osialgl.
PFRNTSP; PIRSP004537; Osialglc_optds; 1.
PRINTS; PR00789; OSIALOPTASE.
PRINTS; PR00789; OSIALOPTASE.
PRODOm; PD002367; Peptidase M22; 1.
TIGREAMS; TIGR00329; gcp; 1.
TIGREAMS; TIGR00329; gcp; 1.
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Q96EV9;
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Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases
EMBL; BC011904; AAH11904.1; -.
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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01-MAR-2001
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GO; GO:0008270; F:zinc ion binding; IEA.
GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
InterPro; IPR000905; Peptidase M22.
InterPro; IPR0009180; Peptidase M22.
Pfam; PF000814; Peptidase M22; 1.
PIRSF; PIRSF004537; Osialglc_pptds; 1.
PRINTS; PR00799; OSIALOPTASE.
ProDom; PD002367; Peptidase_M22; 1.
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GO; GO:0008233; F:peptidase
GO; GO:0008270; F:zinc ion
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Homo sapiens (Human)
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Mammalia; Eutheria;
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RP STRAIN=CZECH II; TISSUE=Mammary tumor;

RX MEDLINE=22388257; pubmed=12477932; DOI=10.1073/pnas.242603899;

RX MEDLINE=22388257; pubmed=12477932; DOI=10.1073/pnas.242603899;

RX Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

RA Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hong L.,

RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

RA Stapleton M.J., Usdin T.B., Toshiyuki S., Carvinici P., Prange C.,

RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carvinici P., Prange C.,

RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

RA Raha S.S., MocWan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

RA Bichards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,

RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,

RA Alones S.J. Marra M.A.;
Query Match
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Matches 233
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                                                                                                                                                                       EMBL; BC058172; AAH58172.1; ...
GO; GO:000845; F:O-staloglycoprotein endopeptidase activity; IEA.
GO; GO:0008270; F:Zinc ion binding; IEA.
GO; GO:0008270; F:Zinc ion binding; IEA.
InterPro; IPR00905; Peptidase M22.
InterPro; IPR00918; Peptidase M22.
InterPro; IPR009180; Peptidase M22.
InterPro; IPR009180; Peptidase M22.
Pfam; PF00814; Peptidase M22; 1.
PIRSF; PIRSF004537; OsialGylc pptds; 1.
PRINTS; PR00789; OSIALOPTASE.
PRINTS; PR00789; OSIALOPTASE.
PRODOM; PD002367; Peptidase M22; 1.
TIGRPAMS; TIGR00329; GCp; 1.
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05-JUL-2004
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
STRAIN=CZECH II; TISSUE=Mammary tumor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Jones S.J., Marra M.A.;
"Generation and initial analysis of and mouse cDNA sequences.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=10090;
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                                                                                                                        Hypothetical protein.
SEQUENCE 414 AA; 4
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                               Similarity
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EKEEGIFLISKVEQINIPGLCLKIAAHFCRYEKGQILSSAADIAATVQHTWACHLVKRTH
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                                                                                                                        44962 MW;
                         88.9%;
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Last annotation updat
Score 1231; DB 2;
Pred. No. 4.6e-97;
5; Mismatches 19;
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SEQUENCE FROM N.A.

STRAIN=CS7BL/SJ; TISSUE=Corpora quadrigemina;

MEDLINE=20530913; PubMed=11076861; DOI=10.1101/gr.152600;

MEDLINE=20530913; PubMed=11076861; DOI=10.1101/gr.152600;

Shibata K., Itch M., Aizawa K., Nigaoka S., Sasaki N., Carninci P.,

Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itch M.,

Konno H., Akiyama J., Nakamura S., Hazama M., Nishine T., Harada A.,

Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Kashiwagi K.,
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Q8BLB6;
01-MAR-2003
01-MAR-2003
                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
STRAIN=C57BL/6G; TISSUE=Corpora quadrigemina;
STRAIN=C57BL/6G; TISSUE=Corpora quadrigemina;
MEDLINNE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;
Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K.,
Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;
"Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new Genome Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
STRAIN=(57BL/6J; TISSUE=Corpora quadrigemina;
MEDLINE=9279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
Carninci P., Hayashizaki Y.;
"High-efficiency full-length cDNA cloning.";
Meth. Enzymol. 303:19-44(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last sequence update)
Mus musculus adult male corpora quadrigemina cDNA, RIKEN full-length
enriched library, clone:B230219017 product:similar to PUTATIVE
SIALOGLYCOPROTEASE TYPE 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the RIKEN Genome Exploration Research "Analysis of the mouse transcriptome 60,770 full-length cDNAs.";
Nature 420:563-573(2002).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN=C57BL/6J; TISSUE=Corpora quadrigemina; MEDLINE=21085660; PubMed=11217851; DOI=10.1038/35055500; RIKEN FANTOM Consortium;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN=C57BL/6J; TISSUE=Corpora
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Mammalia; Eutheria;
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Rodentia;
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criptome based (
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Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Team;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              annotation
                                                                                                                                                                                                                                                                                                        6
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RESTRAIN=C578L/6J; TISSUE=Corpora quadrigemina;

RESTRAIN=C578L/6J; TISSUE=Corpora quadrigemina;

RA Adachi J., Aizawa K., Akimura T., Arakawa T., Bono H., Carninci P.,

RA Adachi J., Aizawa K., Akimura T., Hara A., Hashizume W.,

RA Pukuda S., Furuno M., Hanagaki T., Hara A., Hashizume T.,

RA Hayashida K., Hayatsu N., Hiramoto K., Hiramoka T., Kasukawa T.,

RA Hori F., Imotani K., Ishii Y., Itoh M., Kagawa I., Kasukawa T.,

RA Katoh H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Koya S.,

RA Katoh H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Ohsato N., Okazaki Y.,

RA Katoh H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Ohsato N., Okazaki Y.,

RA Katoh H., Kawai J., Kojima Y., Ohno M., Ohsato N., Okazaki Y.,

RA Saito R., Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H.,

RA Saito R., Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H.,

RA Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.,

RA Tagawa A., Takahashi F., Takaku-Akahira S., Takeda Y., Tanaka T.,

RA Tagawa A., Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y.,

RA Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 233;
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Best Local
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PIRSF; PIRSF004537; OsiaTglc pptds; 1.
PRINTS; PR00789; OSIALOPTASE.
ProDom; PD002367; Peptidase M22; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GO; GO:0008450; F:O-sialoglycoprotein 6
GO; GO:0008233; F:peptidase activity; 1
GO; GO:0008270; F:zinc ion binding; IES
GO; GO:0006508; P:proteolysis and pepti
InterPro; IPR000905; Peptidase M22.
InterPro; IPR009180; Pept M22 Osialgl.
Pfam; PF00814; Peptidase M22; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki Yoneda Y., Ishikawa T., Ozawa K., Tanaka.T., Matsuura S., Kawai Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.; "RIKEN integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer."; Genome Res. 10:1757-1771(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TIGRFAMS; TIGR00329;
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                                                                                                                                                                                                                                                                                                                                                                            EKEEGIEKGQILSSAADIAATVQHTMACHLVKRTHRAILFCKQRDLLPQNNAVLVASGGV
                                                                                                                                                                                                                                                                                     ASNLY IRKALE I VANATOCTLI CPPPRICTONGIMI AWNGI ERLRAGIGVI HOVED IRYE
                                                                                                                                                                                                                                                                                                                                                          EKEEGIEKGQILSSAADIAAAVQHATACHLAKRTHRAILFCKQKNLLSPANAVLVVSGGV
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Pred. No. 1.8e-96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9A2D27B576C7DB24 CRC64;
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Mus musculus 10 days embryo whole lenriched library, clone:2610001M19 SIALOGLYCOPROTEASE TYPE 2.

01-JUN-2001 (TrEMBLrel. 01-JUN-2001 (TrEMBLrel. 01-MAR-2004 (TrEMBLrel.

17, 17, 26,

Created)

Last sequence undate)
Last annotation update)
whole body cDNA, RIKEN

product:similar

full-length to PUTATIVE

Q9D0N0; 01-JUN-2001 Q9D0N0

PRELIMINARY;

414

B

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RP SEQUENCE FROM N.A.

CSTRAIN=CS7BL/GJ; TISSUE=Whole body;

STRAIN=CS7BL/GJ; TISSUE=Whole body;

Adachi J., Aizawa K., Akahira S., Akimura T., Arai A., Aono H.,

AAdachi J., Aizawa K., Akahira S., Pukuda S., Pukunishi Y., Furuno M.,

AA Arakawa T., Bono H., Carninci P., Pukuda S., Pukunishi Y., Furuno M.,

AH Hanagaki T., Hara A., Hayatsu N., Hiranoto K., Hiraoka T., Hori F.,

AH Hanagaki T., Hara A., Hayatsu N., Kasukawa T., Kato H.,

AA Imotani K., Ishii Y., Itoh M., Izawa M., Kasukawa T., Kato H.,

AA Kawai J., Kojima Y., Konno H., Kouda M., Koya S., Kurihara C.,

AA Kawai J., Kojima Y., Konno H., Kouda M., Koya S., Kurihara C.,

AA Matsuyama T., Miyazaki A., Nishi K., Nomura K., Numazaki R., Ohno M.,

AA Matsuyama T., Okido T., Owa C., Saito H., Saito R., Sakai K.,

AA Okazaki Y., Okido T., Owa C., Saito H., Saito R., Sakai K.,

AA Okazaki Y., Okido T., Owa C., Saito H., Saito R., Sakai K.,

AA Okazaki Y., Shibata K., Shibata Y., Shinagawa A., Shiraki T.,

AA Sano H., Sasaki D., Shibata K., Shibata Y., Shinagawa A., Shiraki T.,

AA Sogabe Y., Suzuki H., Tagami M., Tagawa A., Takahashi F., Tanaka T.,

AA Tejima Y., Toya T., Yamamura T., Yasunishi A., Yoshino M.,

AN Muramatsu M., Hayashizaki Y.,

BABL/SHIL, AKOll265, BAB27506.1; -.
               MEROPS;
MGD; MG:
GO; GO:
GO; GO:
GO; GO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN=C57BL/6J; TISSUE=Whole body;
MEDLINB=20530913; PubMed=11076861; DOI=10.1101/gr.152600;
MEDLINB=20530913; PubMed=11076861; DOI=10.1101/gr.152600;
Shibata K., Itch M., Aizawa K., Nagaoka S., Sasaki N., Carninci P.,
Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itch M.,
Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A.,
Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K.,
Fujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watchiki M.,
Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J.,
Okazaki Y., Muramateu M., Inoue Y., Kira A., Hayashizaki Y.;
"RIKEN integrated sequence analysis (RISA) system-384-format
sequencing pipeline with 384 multicapillary sequencer.";
Genome Res. 10:1757-1771(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Genome
[6]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN=C57BL/6J; TISSUE=Whole body;
MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;
Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., It
Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;
"Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new ge
Genome Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the RIKEN Genome Exploration Research Group Phase "Analysis of the mouse transcriptome based on func 60,770 full-length CDNAs.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN=C57BL/6J; TISSUE=Whole body;
MEDLINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
Carninci P., Hayashizaki Y.;
"High-efficiency full-length cDNA cloning.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN=C57BL/6J; TISSUE=Whole body; MEDLINE=21085660; PubMed=11217851; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nature 420:563-573 (2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=C57BL/6J; TISSUE=Whole
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
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Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Name=Osgepl1;
Mus musculus (Mouse)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
               GO:0008450; F:O-sialoglycoprotein endopeptic
GO:0008233; F:peptidase activity; IEA.
GO:0008270; F:zinc ion binding; IEA.
GO:0006508; P:proteolysis and peptidolysis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FANTOM Consortium,
                                                                                                        MGI:1919335; Osgepl1.
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                                                                                                                                 M22.004;
IPR000905;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              body;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOI=10.1038/35055500
                                                            endopeptidase activity; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               functional
                        IEA
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                                                                                                                                                                                     RX PubMed=1247793; DOI=10.1073/pnas.242603899;
RX Strausberg R.L., Peingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Diatchenko L., Marusina K., Foshiyuki S., Carninci P., Prange C.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Raha S.S., Morley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Pahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RA Krzywinski M.I., Skalska U., Smailus D.E., Schmerch A., Schein J.E.,
RA Topes S. T. Marra M.A.
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Pfam; PP00814; Peptidase M22; 1.
PIRSF; PIRSF004537; Osialg1c pptds; 1.
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ProDom; PD002367; Peptidase_M22;
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Mammalia; Eutheria; Rodentia;
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                        SEQUENCE FROM N.A
                                                                                                                                                                   Jones S.J., Marra M.A.;
                                                                                                             'Generation and initial analysis of 
and mouse cDNA sequences.";
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Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q96NH5
Q96NH5;
Q1-DEC-2001
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 26, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Hypothetical protein FLJ30879.
Homo sapiens (Human).
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GO; GO:0008450; F:O-sialoglycoprotein endopeptidase activity; IEA.
GO; GO:0008270; F:zinc ion binding; IEA.
GO:0006508; P:proteolysis and peptidolysis; IEA.
InterPro; IPR009095; Peptidase M22.
InterPro; IPR009180; Peptidase M22.
InterPro; IPR009180; Pept_M22_Osialgl.
InterPro; IPR002016; Peroxidase.
Pfam; PF00814; Peptidase M22; 1.
PIRSF; PIRSF004537; Osialglc pptds; 1.
PRINTS; PR00789; OSIALOPTASE.
PRODOM; PD002367; Peptidase M22; 1.
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PROSITE: PS00435; PEROXIDASE 1; UNKNOWN 1.

Hypothetical protein.

NON_TER 467 467
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EKEEGIEKGQILSSAADIAAAVQHATACHLAKRTHRAILFCQQKNLLSPANAVLVVSGGV
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88.4%; Pred. No. 3.8e-87;
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Best Local Sim
Matches 214;
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Yoshikawa Y., Matsunawa H., Ichihara T., Shiohata N., Sano S.,
AA Moriya S., Momiyama H., Satoh N., Takami S., Terashima Y., Suzuki O.,
AA Makagawa S., Senoh A., Mizoguchi H., Goto Y., Shimizu F., Wakebe H.,
AA Hishigaki H., Watanabe T., Sugiyama A., Takemoto M., Kawakami B.,
Yamazaki M., Watanabe K., Kumagai A., Itakura S., Pujiwara T.,
AA Misusaki M., Watanabe K., Kumagai A., Itakura S., Pujiwara T.,
AA Ono T., Yamada K., Fujii Y., Ozaki K., Hizao M., Ohmori Y.,
AA Ono T., Yamada K., Fujii Y., Ozaki K., Hizao M., Ohmori Y.,
AA Ono T., Yamada K., Fujii Y., Ozaki K., Hizao M., Ohmori Y.,
AA A Kawabata A., Hikiji T., Kobatake N., Inagaki H., Ikema Y., Okamoto S.,
AA Kawabata A., Hikiji T., Kobatake N., Inagaki H., Ikema Y., Okamoto S.,
AA Kawabata A., Hikiji T., Kobatake N., Itoh T., Shigeta K., Senba T.,
AA Akitani R., Kawakami T., Noguchi S., Itoh T., Shigeta K., Senba T.,
AA Matsumura K., Nakajima Y., Mizuno T., Morinaga M., Sasaki M.,
AA Matsumura K., Nagase T., Nomura N., Kikuchi H., Masuho Y., Yamashita R.,
AA Nakai K., Yada T., Nakamura Y., Ohara O., Isogai T., Sugano S.,
TOMAS ".. Ohara O., Isogai T., Sugano S.,
Tomas ".. Ohara O., Isogai T., Sugano S.,
Tomas ".. Ohara O., Isogai T., Sugano S.,
Tomas ".. Ohara O., Isogai T., Sugano S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                   GG; GO:0008450; F:O-sialoglycoprotein endopeptidase activity; IEA.
GG; GO:0008270; F:Deptidase activity; IEA.
GG; GO:0008270; F:Zinc ion binding; IEA.
GG; GO:0008270; F:Zinc ion binding; IEA.
GG; GO:0006508; P:proteolysis and peptidolysis; IEA.
InterPro; IPR009095; Peptidase M22:
InterPro; IPR009180; Peptidase M22:
Pfam; PF00814; Peptidase M22; 1.
PIRSF; PIRSF004537; Osialg1c pptds; 1.
PRINTS; PR00789; OSIALOPTASE.
PRODORS; PO00789; OSIALOPTASE.
PRODORS; PR00789; OSIALOPTASE.
PRODORS; PRO0789; OSIALOPTASE.
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EMBL; AK055441; BAB70923.1; -.
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328
                                     181
                                                                            268
                                                                                                                  121
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                                                                                                                                                                                                                                    Similarity
                                                                                                 EKEEGIEKGQILSSAADIAATVQHTMACHLVKRTHRAILFCKQRDLLPQNNAVLVASGGV
                                                                                                                                                                              LSLIKHPECSTMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKK
                  ASNFYIRRALBILTNATQCTLLCPPPRLCTDNGIMIA 217
                                                                                                                                                           LPLIKHPECSTMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFPFTGLQHVTDKIIMKK
                                                                            EKEEGIEKGQILSSAADIAATVQHTMACHLVKRTHRAILFCKQRDLLPQNNAVLVASGGV
ASNFCIRRALBILTNATQCTLLCPPPRLCTDNGIMIA
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                                                                                                                                                                                                                                                                                                                                                                                                      364 AA;
                                                                                                                                                                                                                                                                                                                       Conservative
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Pred. No. 2.5e-86;
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RESULT 8
(BAJFW3) PRELIMINARY; PRT; 404 AA.

ID QBJFW3;
DT 01-OCT-2002 (TrEMBLrel. 22, Created)
DT 01-CT-2002 (TrEMBLrel. 22, Last sequence update)
DT 01-MAR-2004 (TrEMBLrel. 22, Last sequence update)
DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DT 01-MAR-201013.4 (Novel glycoprotease).

GN Name=dZ72B14.6;
GN Name=dZ72B14.6;
CR Name-dZ72B14.6;
CR Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
CR Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
CC Cyprinidae; Danio.
CC Cyprinidae; Danio.
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Best Local S
Matches 165
                                                                                                      EMBL; AL672217; CAD43443.1; -
MEROPS; M22.004; -
GO; GO:0008450; F:O-sialoglyc
GO; GO:0008230; F:peptidase a
GO; GO:0008270; F:zinc ion bi
GO; GO:0008508; P:proteolysis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q8JFR7;
Q8JFR7;
01-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GG; GO:0008450; F:O-sialoglycoprotein endopeptidase activity; GG; GO:0008233; F:peptidase activity; IEA.
GG; GO:0008270; F:Zinc ion binding; IEA.
GG; GO:0008508; P:proteolysis and peptidolysis; IEA.
InterPro; IPR000905; Peptidase M22.
InterPro; IPR009180; Peptidase M22.
InterPro; IPR009180; Peptidase M22 Osialgl.
Pfam; PP00814; Peptidase M22; 1.
PIRSF; PIRSF004537; Osialglc pptds; 1.
PRINTS; PR00789; OSIALOPTASE.
PRODOR; PD002367; Peptidase M22; 1.
                       GO; GO:0008450; F:O-sialoglycoprotein endopeptidase activity; GO; GO:0008233; F:peptidase activity; IEA.
GO; GO:0008270; F:zinc ion binding; IEA.
GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
InterPro; IPR000905; Peptidase M22.
InterPro; IPR009180; Peptidase M22.
Ffam; PF00814; Peptidase M22; 1.
PIRSF; PIRSF004537; Osialglc_pptds; 1.
PRINTS; PR00789; OSIALOPTASE.
ProDom; PD002367; Peptidase_M22; 1.
                                                                                                                                                                                                                                                                  Name=SI:dZ72B14.6;
Brachydanio rerio (Zebrafish) (Danio rerio).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
                                                                                                                                                                                                                                                                                                                      01-OCT-2002 (TrEMBLrel. 22, Created)
01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
SI:dZ72B14.6 (Novel glycoprotease).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Protease.
SEQUENCE
                                                                                                                                                                                        Submitted (JUN-2003)
                                                                                                                                                                                                                                                           Cyprinidae;
                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                            NCBI_TaxID=7955;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TIGRFAMs; TIGR00329; gcp; 1.
            TIGRFAMS; TIGR00329;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ASNFYIRRALEILTNATQCTLLCPPPRLCTDNGIMIAWNGIERLRAGLGILHDIEGIRYE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EKEEGIEKGQILSSAADIAATVQHTMACHLVKRTHRAILFCKQRDLLPQNNAVLVASGGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LSLRNHPECGTLSGGQAIERLAKEGDRLAFHFISPMGQNYDCNFSFAGLRTQITGAINKK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LSLIKHPECSTMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PKCPLGVDISKEVGEASIKVPQLKM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ASNEYIRQILKIITDATGLHLLCPPSKFCTDNGVMIAWNGIERLKQGKGILSYSEEVSYE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EKEEGVEAGQFLSCVKDIAAASQHTVASHLAKRTHRAILFCKSKGLLPEQNPTLIVSGGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                PKAPLGLDITSEVKEAAIKVPKLKL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           404 AA;
                                                                                                                                                                                                                                                           Danio.
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                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAD43471.1;
            Peptidase_M22; 1.
29; gcp; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           43956 MW;
                                                                                                                                                                                        to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   62.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 859; DB 2;
Pred. No. 3.4e-65;
                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3A6B1DD050737E35 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
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                                                                                                                                                                                  Query Match
Best Local S
Matches 106
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Best Local (
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GO; GO:0008270; F:zinc ion binding; IEA.
GO; GO:0006508; P:proteolysis and peptidolysis; IE
InterPro; IPR00905; Peptidase M22.
InterPro; IPR009180; Peptidase M22 Osialgl.
Pfam; PF00814; Peptidase M22; 1.
PIRSP; PIRSP004537; Osialglc pptds; 1.
PRINTS; PR00789; OSIALOPTASE.
PRINTS; PR00789; OSIALOPTASE.
PRODm; PD002367; Peptidase M22; 1.
IGGRPAMs; TIGGR0329; gcp; 1.
NON TER
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Q7Q918;
Q1-MAR-2004 (
Q1-MAR-2004)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Nematocera; Culicoidea; Ano
NCBI_TaxID=180454;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Anopheles Genome Sequencing Consortium;
Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.
-i- CAUTION: The sequence shown here is derived from an
EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry v
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-MAR-2004 (TrEMBLrel.
01-MAR-2004 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Anopheles gambiae str. PEST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Name=agCG46164;
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                                                                                                                                                                                                                                                                                  SEQUENCE
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                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                preliminary data.
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    179
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                                                                                                                                                                                     106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAAB01008900; EAA09387.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13
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                                                                                          LSLIKHPECSTMSGGKAIEHLAKQG-----NRFHFDIKPPLHHAKNCDFSFTGLQHVTDK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PKAPLGLDITSEVKEAAIKVPKLKL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LSLIKHPECSTMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ASNEYIRQILKIITDATGLHLLCPPSKFCTDNGVMIAWNGIERLKQGKGILSYSEBVSYE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EKEEGVEAGQFLSCVKDIAAASQHTVASHLAKRTHRAILFCKSKGLLPEQNPTLIVSGGV
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LKLRNVAKYAQMSGGQATEAAAQQAGAKDTSAYEPPL--PLSKYRDCQFSFAGLKNTATR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   404
                                                                                                                                                                                                                                                                               401 AA;
                                                                                                                                                                                          Conservative
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                                                                                                                                                                                                                                                                               43849 MW;
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61.9%;
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Last sequence update)
Last annotation updat
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Pred. No. 7.6e-65;
                                                                                                                                                                                                             Score 453.5; DB 2
Pred. No. 1.9e-30;
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                                                                                                                                                                                                                                                                                  CC9426723D3FD4F1 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Sin
Matches 100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A Champe M., Chavez C., Dorsett V., Farfan D., Frise E., Goorge R.,
A Gonzalez M., Guarin H., Li P., Liao G., Miranda A., Mungall C.J.,
A Nunco J., Pacleb J., Paragas V., Park S., Phouanenavong S., Wan K
A Yu C., Lewis S.E., Rubin G.M., Celniker S.;
IS Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
EMEL; AY051882; AAK93306.1; -.
IR FlyBase; FBgn0031060; CG14231.
IR GO; GO:0008450; F:O-sialoglycoprotein endopeptidase activity; IEA
GO; GO:00086270; F:zinc ion binding; IEA.
IR GO; GO:00086270; F:zoteolysis and peptidolysis; IEA.
IR GO; GO:0008630; P:proteolysis and peptidolysis; IEA.
IR GO; GO:0008630; Peptoteolysis and peptidolysis; IEA.
InterPro; IPR000905; Peptidase M22.
InterPro; IPR00180; Pept M22 Osialgl.
IR Flam; PP00814; Peptidase M22; I
PIRSF; PIRSF004537; Osialglo_pptds; 1.
PIRSF; PIRSF004537; Osialglo_pptds; 1.
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Q960S6;
01-DEC-2001
01-DEC-2001
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Drosophila melano
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Stapleton M., Brokstein P., Hong L., Agbayani A., Carlson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN=Berkeley;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ephydroidea;
                                                                                                                                                                                                                                                                                                                                                                             110
                                                                                                                                                                                                                                                         170
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ASTRYDYD---SIDIQGSAGFA
                                                             -GIRYEDKCPLGVDISKEVGEA
                                                                                                                                                           ASGGVASNFYIRRALEILTNATQCTLLCPPPRLCTDNGIMIAWNGIERLRAGLGILHDIE
                                                                                                                                                                                                                                                  RARERAERTPPDGVISNYGDFCAGLLRSVSRHLMHRTQRAIEYCLLPHRQLFGDTPPTLV
                                                                                                                                                                                                                                                                                      MKKEKEEGIEKGQILSSAADIAATVQHTMACHLVKRTHRAILFC--KQRDLLPQNNAVLV
                                                                                                                                                                                                                                                                                                                                                                                                                                       RRISLIKHPECSTMSGGKAIEHLAK-QGNRFHFDIKPPLHHAKNCDFSFTGLQHVTDKII 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEAHALQARMEHPEQIGYPFLCLLASGGHCQLVVANGPGRLTLLGQTLDDAPGEAFDKIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEAHALTIRLIN--KVEFPFLVLLISGGHCLLALVQGVSDFLLLGKSLDIAPGDMLDKVA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HDIEGIRYEPKCPLGVDISKEVGEASIKVPQLKMEI 267
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                                                                                                                          MSGGVANNDAIYANIEHLAAQYGCRSFRPSKRYCSDNGVMIAWHGVEQL-----LQDKE
                                                                                                                                                                                                                                                                                                                                                                                RRLRLHILPEYRLWNGGRAIEHAAQLASDPLAYEPPLPLAQQRNCNFSFAGIKNNSFRAI
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (TrEMBLrel. 19, 0
(TrEMBLrel. 19, 1
(TrEMBLrel. 26, 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              323 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              35828 MW;
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Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 415.5; DB 2
Pred. No. 2.7e-27;
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                                                             6)
(4)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   104; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
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ngall C.J.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                     235
                                                                                                                                                                                                                                                                                                                                                                                169
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RESULT 12
QOYWD9
ID VWD9
ID VWD9
ID VWD9
ID VWD9
ID 1-MA
ID 01-MA

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RA Addms M.D., Celniker S.E., Holt R.A., Evans C.A., Golle R.F.,
RA Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Golle R.F.,
RA Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Golle R.F.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
RA Brandon R.C., Rogers Y.H., Blazej R.G., Champe M., Pfeiffer B.D.,
RA Barladon R.C., Rogers Y.H., Blazej R.G., Champe M., Pfeiffer B.D.,
RA Barladon R.C., Rogers Y.H., Blazej R.G., Champe M., Pfeiffer B.D.,
RA Barli J.F., Agbayani A., An H.J., Andrews-Pfannkoch C.R., Gabor G.L.,
RA Abril J.F., Agbayani A., An H.J., Andrews-Pfannkoch C.R., Gabor G.L.,
RA Beson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Gerby J.M., Cawley S., Dahlke C., Davengort D., Bolshakov S.,
RA Gerry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Gebabios B., Delchan M.R., Bouck J., Brokstein P., Brottier P.,
RA depablos B., Delcher A., Deng Z., Mays A.D., Dew I., Dietz S.M.,
RA depablos B., Delcher A., Demg Z., Mays A.D., Dew I.O., Dietz S.M.,
RA depablos B., Delcher A., Demg Z., Mays A.D., Dew I.O., Dietz S.M.,
RA depablos B., Correll J.H., Gu Z., Guan P., Harris M.,
RA Goldek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Harris N.I., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Harris N.I., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Harris N.I., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Lasko P., Lei Y., Levitaky A.A., Li J., Li Z., Liang Y., Lin X.,
RA McIndow G., Milshina N.V., Mobarry C., Worris J., Woshrefi A.,
RA Merkulov G., Milshina N.V., Mobarry C., Worris J., Woshrefi A.,
RA Melson D.R., Nelson K.A., Wanders R.D., Scheeler F., Shen H.,
RA Svirskas R., Tector C., Turner R., Venter E., Wang A.H., Wang X.,
RA Sylva Ra, M., Maryohy B., Murphy L., Muray D., M., Pacleb J.M.,
RA Harris J., Shang S., Zhang S.,
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Q9VWD6;
01-MAY-2000
01-MAY-2000
01-MAR-2004
                                                                                                                                                                                  Celniker S.B., Wheeler D.A., Kronmiller B., Carlson J.W., Halpern A., Patel S., Adams M., Champe M., Dugan S.P., Frise E., Hodgson A., George R.A., Hoskins R.A., Laverty T., Muzny D.M., Nelson C.R., Pacleb J.M., Park S., Pfeiffer B.D., Richards S., Sodergren E.J., Svirskas R., Tabor P.B., Wan K., Stapleton M., Sutton G.G., Venter C., Weinstock G., Scherer S.B., Myers B.W., Gibbs R.A., Rubin G.M., "Finishing a whole-genome shotgun: Release 3 of the Drosophila melanogaster euchtromatic genome sequence.";
Genome Biol. 3:RESEARCH0079-RESEARCH0079(2002).
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Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
NCBI_TaxID=7227;
MEDIINE=22426070; PubMed=12537573;
Kaminker J.S., Bergman C.M., Kronmiller B., Carlson J., S
Patel S., Frise B., Wheeler D.A., Lewis S.E., Rubin G.M.,
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ORFNames=CG14231;
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O22145; Q8VWL2;
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GO; GO:0008450; F:O-sialoglycoprotein endopeptidase activity;
GO; GO:0008270; F:zinc ion binding; IEA.

GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
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me Biol. 3:RESEARCH0084-RESEARCH0084(2002).
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43; Mismatches 104;
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Submitted (JUN-2002) to the EMBL EMBL; AC002387; AAB82636.2; --
EMBL; AY024338; AAK00530.1; --
EMBL; AY063864; AAL36220.1; --
EMBL; AY117283; AAM51358.1; --
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Arabidopsis thaliana (Mouse-ear cress).
Eukaryota; Viridiplantae; Streptophyta; Embryo
Spermatophyta; Magnoliophyta; eudicotyledons;
eurosids II; Brassicales; Brassicaceae; Arabio
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GO; GO:0008270; P:zinc ion binding; IEA.
GO; GO:0008270; P:zinc ion binding; IEA.
Interpro; IPR00905; Peptidase M22.
Interpro; IPR009095; Peptidase M22.
Interpro; IPR0091910; Peptidase M22.
PIRSF PIRSF004537; Osialglc pptds; 1.
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ProDom; PD002367; Peptidase M
TIGRFAMs; TIGR00329; gcp; 1.
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                                                                                                                                                                      52995 MW;
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                                                                                                            Pred. No. 2.16
7; Mismatches
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dons; core eudicots; rosid
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Jones T.,
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GO; GO:0008450; F:O-sialoglycoprotein endopeptidase activity; IEA.

GO; GO:0008270; F:zinc ion binding; IEA.

GO; GO:0006508; P:proteolysis and peptidolysis; IEA.

InterPro; IPR000916; Peptidase M22.

InterPro; IPR0009180; Peptidase M22 Osialgl.

Pfam; PF00814; Peptidase M22; Osialgl.

PIRSF; PIRSF004537; Osialglc_pptds; 1.

PRINTS; PR007389; OSIALOPTASE.

PRODOM; PD002367; Peptidase_M22; 1.
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Brownlie J.C., McGraw E.A., Martin W., Esser C., Ahmadinejad N.,
Wiegand C., Madupu R., Beanan M.J., Brinkac L.M., Daugherty S.C.,
Durkin A.S., Kolonay J.F., Nelson W.C., Mohamoud Y., Lee P.,
Berry K.J., Young M.B., Utterback T.R., Weidman J.F., Nierman W.C.,
Paulsen I.T., Nelson K.E., Tettelin H., O'Neill S.L., Eisen J.A.;
"Phylogenomics of the reproductive parasite Wolbachia pipientis wMel:
a streamlined genome overrun by mobile genetic elements.";
PLoS Biol. 2:327-341(2004).
EMBL, AEO17258; AAS14395.1; -.
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05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
Peptidase, M22 family protein.
OrderedLocusNames=WD0699;
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                                                                                                                                                                                                                                                                                                                                                                 61 LSLIKHPECSTMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKK 120
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335 AA; 36634 MW;
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RA Boistard P., Becker A., Boutry M., Cadleu E., Dreano S., Gloux S.,
RA Godrie T., Goffeau A., Kahn D., Kiss E., Lelaure V., Masuy D.,
RA Pohl T., Portetelle D., Puehler A., Purnelle B., Ramsperger U.,
RA Renard C., Thebault P., Vandenbol M., Weidner S., Galibert F.;
RT "Analysis of the chromosome sequence of the legume symbiont
Sinorhizobium melilotti strain 1021.";
RT Proc. Natl. Acad. Sci. U.S.A. 98.9877-9882(2001).
RT Proc. Natl. Acad. Sci. U.S.A. 98.9877-9882(2001).
RML; AL591792; CAC47657.1; -
DR GO; GO:0016787; F:hydrolase activity; IEA.
GO; GO:0016787; F:hydrolase activity; IEA.
GO; GO:0008450; F:c.sialoglycoprotein endopeptidase activity; IEA.
GO; GO:0008270; F:zinc ion binding; IEA.
GO; GO:0008270; F:zinc ion binding; IEA.
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Q1-DEC-2001 (TrEMBLrel. 29, La
Q1-MAR-2004 (TrEMBLrel. 26, La
PROBABLE O-SIALOGLYCOPROTEIN E
ORFNames=SMC03230;
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35.6%; Pred. No. 3.5e-22;
cive 38; Mismatches 91
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	13, Appl	13, Appl	22790, A	968, App	31318, A	7, Appli	2, Appli	5549, Ap	3008, Ap	15572, A	5, Appli	13841, A	3197, Ap	5050, Ap	4609, Ap	81, Appl	4387, Ap

RESULT 1 US-10-067-443-22

ALIGNMENTS

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Sequence 22, Application US/10067443

Patent No. 6642041

GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
ITILE OF INVENTION: POLYNUCLEOTIDE ENCODING A 1
ITILE OF INVENTION: SPINAL CORD, MP-1
ITILE OF INVENTION: SPINAL CORD, MP-1
FILE REFERENCE: DO073 NP
CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2002-02-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR PILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOPTWARE: Patentin version 3.0
SEQ ID NO 22
LENGTH: 267
TYPE: PRT
ORGANISM: homo sapiens
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Best Local Similarity
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RESULT 2 US-10-067-443-2

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TITLE OF INVENTION: POLYNUCLECTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED
TITLE OF INVENTION: SPINAL CORD, MP-1
FILE REPERENCE: D0073 NP
CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOFTWARE: PatentIn version 3.0
SEQ ID NO 2
SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Patent No. 6642041
GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED
TITLE OF INVENTION: SPINAL CORD, MP-1
FILE REFERENCE: D0073 NP
FILE REFERENCE: D0073 NP
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GENERAL INFORMATION:
                                                                                                                                                                                                                            SEQ ID NO 19
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Best Local Similarity
                                                                                                                          LENGTH: 439
TYPE: PRT
ORGANISM: homo sapiens
-10-067-443-19
                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
                                                                                                                                                                                                                                                    SOFTWARE: PatentIn version 3.0
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TYPE: PRT
ORGANISM: Homo sapiens
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100.0%; Pred. No. 7.3e-160;
htive 0; Mismatches 0;
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91.1%;
                                              Score 1358.5; DB 4
Pred. No. 1.4e-156;
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GENERAL INCOGNATION:
APPLICANT: Bristol-Myers Squibb Company
ITILE OF INVENTION: POLYNUCLEOTIDE ENCODING A N
ITILE OF INVENTION: SPINAL CORD, MP-1
FILE REFERENCE: D0073 NP
CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
SOFTWARE: PATENTION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
SOFTWARE: PATENTION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
SOFTWARE: PATENTION NUMBER: US 60/282,814
PRIOR APPLICATION NUMBER: US 60/286,518
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US-09-240-236-2726

US-09-240-236-2726

; Sequence 2726, Application US/09540236

; Patent No. 6673910
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US-10-067-443-3
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Matches
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                                                                                                                                                      DPPPPATEPEDYVYDLRPRWPLGEEYAKGRSEA
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                                                                                                                                                                                                       PKCPLGVDISKEVGEA 256
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; ORGANISM: Pseudomonas aeruginosa
US-09-252-991A-17372
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US-09-540-236-2726
                                                                                                                                                                                                                                                           ; APPLICANT: MARC J. Rubenfield et al.
; TITLE OF INVENTION: NUCLEIC ACID AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS;
; TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
; FILE REFERENCE: 107196.136
; CURRENT APPLICATION NUMBER: US/09/252,991A
; CURRENT FILING DATE: 1999-02-18
; PRIOR APPLICATION NUMBER: US 60/074,788
; PRIOR FILING DATE: 1998-07-21
; PRIOR FILING DATE: 1998-07-27
; NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 17372
; LENCTHY A 01
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APPLICANT: GATY L. Breton et al.
TITLE OF INVENTION: NUCLEIC ACID AMINO ACID SEQUENCES RELATING
TITLE OF INVENTION: FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 2709.2005-001
CURRENT APPLICATION NUMBER: US/09/540,236
CURRENT FILING DATE: 2000-04-04
                                                                                                                                                                   Query Match
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Best Local Similarity
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SEQ ID NO 2726
LENGTH: 350
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 LIGL-GYP--
                                                                                  MEAHALTIRLTNK-VEFPFLVLLISGGHCLLALVQGVSDFLLLGKSLDIAPGDMLDKVAR 59
                                RLSLIMIFECSTMSGGKAIEHLAKQGMRFHFÜIKFFLHHÄKNUDFSFTGLQHVTDKIIMK 119
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                                                                 MEGHLLAPMLEEQPPRFPFVALLVSGGHTQLVRVDGIGRYQLLGESVDDAAGEAFDKTAK 231
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                                                                                                                                    Conservative
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GGPEIARLAERGTPGRFVFPRPMTDRPGLDFSFSGLKTFTLN-TWQ 283
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                                                                                                                                 Score 291.5; DB 4;
Pred. No. 1.6e-26;
7; Mismatches 99;
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                                                                                                                                                                Length 401;
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Patent No. 554331
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CURRENT APPLICATION NUMBER: US/09/543,681A CURRENT FILING DATE: 2000-04-05 PRIOR APPLICATION NUMBER: US 60/128,706 PRIOR FILING DATE: 1999-04-09 NUMBER OF SEQ ID NOS: 8344 SEQ ID NO 6513 LENGTH: 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 6513, Application US/09543681A Patent No. 6605709
                                                                  GENERAL INFORMATION:
APPLICANT: Mellors, Alan
APPLICANT: Lo, Reggie Y.C.
APPLICANT: Abdullah, Khalid M.
TITLE OF INVENTION: Pasteurella Haemolytica
TITLE OF INVENTION: Glycoprotease
TITLE OF INVENTION: Gene and the Parified E:
NUMBER OF SEQUENCES: 3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Proteus mirabilis
                       CORRESPONDENCE ADDRESS:
ADDRESSE: Bell, Seltzer, Park & Gibson, P.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
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                                                                                                                                                                                                                                                                                                   Application US/08087797
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1211 Bast Morehead Street,
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                                                                                                 Parified Enzyme
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                                                                                                                                                                                                                                      Sequence 4, Application US/10067443
Patent No. 6642041
GENERAL INFORMATION:
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SOFTWARE: PatentIn version 3.0 SEQ ID NO 4 LENGTH: 421
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                                               APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED
TITLE OF INVENTION: SPINAL CORD, MP-1
FILE REFERENCE: D0073 NP
CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR PILING DATE: 2001-02-05
PRIOR PILING DATE: 2001-02-05
PRIOR PILING DATE: 2001-04-10
NUMBER: OF SEQ ID NOS: 71
NUMBER OF SEQ ID NOS: 71
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INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Layton, Jr., Samuel G.
REGISTRATION NUMBER: 22807
REFERENCE/DOCKET NUMBER: 337
TELECOMMUNICATION INFORMATION:
TELEPHONE: 704 377 1561
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ATTORNEY/AGENT INFORMATION:
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MEDIUM TYPE: Floppy
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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TOPOLOGY: lin
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No. 5543312th Carolina
: United States
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                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR FILING DATE: 2001-04-10
                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 421
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     IRYEP-----
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GENERAL INFORMATION:

APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A 1
TITLE OF INVENTION: SPINAL CORD, MP-1
PILE REFERENCE: D0073 NP
CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR PILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
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                                                           303 GGGVAANQYIFGAISKLSAAHNVTTIKVLLSLCTDNAEMIAYSGL--
                                                                                                                      177 SGGVASNFYIRRALBILTNATQCTLLCPPPRLCTDNGIMIAWNGIERLRAGLGILHDIEG 236
                                                                                                                                                                                       253 RLRKNSETSID-----IPDFCASLQNTVARHISSKLHIFFESLSEQEKLPKQ---LVI
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                                                                                                                                                                                                                                                                                                                194 QLGDL-GSEFDGIHVGAAVEILASRASADGHLRYPIFLPNVPKANMNFDQIKGSYLNLLE 252
                                                                                                                                                                                                                                                                                                                                                                                                                                             134 MRAHALSILLVDDSVRFPFSAVLLSGGHALISVAEDVEKFKLYGQSVSGSPGECIDKVAR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19.9%; Score 276; DB 4; 30.4%; Pred. No. 1.4e-24;
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-KCPLGVDISKEVGEASIKVPQLKM 265
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RESULT 12
US-09-409-039A-9221
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US-08-087-797-2
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GENERAL INFORMATION:
               Sequence 9221, Application US/09489039A Patent No. 6610836
                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 2, Application Patent No. 5543312
                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 19.5%;
Best Local Similarity 35.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: 704 334 2014
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: Patentin Release #1.0, CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/087,797 FILING DATE: 14-JUL-1993 CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
LENGTH: 325 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELECOMMUNICATION INFORMATION: TELEPHONE: 704 377 1561
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 325 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Layton, Jr., Samuel G.
REGISTRATION NUMBER: 22807
REFERENCE/DOCKET NUMBER: 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP: 28234
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: Charlotte
STATE: No. 5543312th Carolina
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET:
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                                                                                                                                                   180 VASNFYIRRALBILTNATQCTLLCPPPRLCTDNGIMIAWNGIERLR 225
                                                                                                                                                                                                                     120 KEKEEGIEKGQILSSAADIAATVQHTMACHLVKRTHRAILFCKQRDLLPQNNAVLVASGG 179
                                                                                                                                                                                                                                                      172 LLGL-DYP-----AGVAMSKLAESGTPNRFKFPRPMTDRPGLDFSFSGLKTFAANTIKA
                                                                                                                                                                                                                                                                                        60 RLSLIKHPECSTMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMK 119
                                                                                                                                                                                                                                                                                                                                                                                          79;
                                                                                                                                                                                                                                                                                                                                                          1 MEAHALTIRL-TNKVEFPFLVLLISGGHCLLALVQGVSDFLLLGKSLDIAPGDMLDKVAR 59
                                                                                                                                                                                    NLNBNGBLDEQ---TKCDIAHAFQQAV-----VDTILIKCK-RALEQTGYKRLVMAGG
                                                                                                                                                                                                                                                                                                                         MEGHLLAPMLEENAPEFPFVALLISGGHTQLVKVDGVGQYELLGESIDDAAGEAFDKTGK 171
                                                                                                                   VSANKQLRADLAEMMKKLKGEVFYPRPQFCTDNGAMIAYTGFLRLK 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      E: Bell, Seltzer, Park & Gibson, P.A. 1211 East Morehead Street,
                                                                                                                                                                                                                                                                                                                                                                                           Conservative
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Abdullah, Khalid M.
/ENTION: Pasteurella Haemolytica
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Pred. No. 4.2e-24;
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                                                                                                                                                                                                                                                                                                                                                                                                                           Length 325;
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RESULT 13
US-09-107-532A-6609
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; TYPE: PRT
; ORGANISM: Klebsiella pneumoniae
US-09-489-039A-9221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 6609, Application US/09107532A Patent No. 6583275
GENERAL INFORMATION:
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SEQ ID NO 9221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: GATY Breton et. al
TITLE OF INVENTION: NUCLERIC ACID AND AMINO ACID SEQUENCES RELATING TO KLEBSIELLA
TITLE OF INVENTION: PNEUMONIAE FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 2709.2004001
                                                               CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/107,532A

PILING DATE: 30-Jun-1998

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 60/085,598

FILING DATE: 14 May 1998

APPLICATION NUMBER: 60/051571

FILING DATE: July 2, 1997

ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Lynn A Doucette-Stamm
TITLE OF INVENTION: NUCLEIC ACID
ENTEROCOCCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   330 TVRPRWPL
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                                                                                                                                                                                                                                                                          COMPUTER: PC
OPERATING SYSTEM: <Unknown>
SOFTWARE: ASCII
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  STATE: Massachusetts
                   NAME: Ariniello, Pamela Deneke
REGISTRATION NUMBER: 40,489
                                                                                                                                                                                                                                                                                                                                                                                                         ZIP: 02354
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: Waitham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET: 100 Beaver Street
REFERENCE/DOCKET NUMBER: GTC-012
                                                                                                                                                                                                                                                                                                                                                      MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE: GENOME THERAPEUTICS CORPORATION
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Pred. No. 8.1e-24;
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AND AMINO ACID SEQUENCES RELATING TO
FAECIUM FOR DIAGNOSTICS AND THERAPEUTICS
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CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Webster, Thomas D.
REGISTRATION NUMBER: 39,872
REFERENCE/DOCKET NUMBER: X-
TELECOMMUNICATION INFORMATION:
TELEPHONE: 317-276-3334
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 4, Application GENERAL INFORMATION:
APPLICANT: Hoskin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
ADDRESSEB: Eli Lilly and Company
STREET: Lilly Corporate Center
CITY: Indianapolis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: Str
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                            SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES:
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                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                STATE:
                                                                                                                                                                                                              APPLICATION NUMBER:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: misc_feature
LOCATION: (B) LOCATION 1...363
SEQUENCE DESCRIPTION: SEQ ID NO: 6609:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  140 MAGHIYAARLVKPFQFPLMALLVSGGHTELVYMQEDGSYEIIGETRDDAAGEAYDKVGRV 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  251 AQQRGEDLDKN--
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 LSLIKHPECSTMSGGKAIEHLAKQG-NRFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMK 119
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                                                                                                                                                                                                                                                                                                                                                          46285
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SGGVASNEYIRRALEILTNA--TQCTLLCPPPRLCTDNGIMI 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/08987121A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGGVAANQGLREGLQAALSAKLPEVELVIPPLRLCGDNAAMI 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LGL-----SYPSGKEIDQLAHQGKDNYHF--PRAMIHEDNYDFSFSGLKSAFINLVHN 250
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 363 amino acids TYPE: amino acid
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Treadway, Patti Jean
VENTION: Streptococcus Pneumoniae Gene Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hoskins, Jo Ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (781)893-8277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (781)893-5007
                                                                                                                                                                                                           US/08/987,121A
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                                                                                                                                                                                                                                                    Version #1.30
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                                                                       ; TOPOLOGY: linear; MOLECULE TYPE: protein US-08-961-083-52
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Query Match 18.1%;
Best Local Similarity 32.0%;
Matches 72; Conservative 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Patent No. 6159469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
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                                                                                                                                                                                                  TELEFAX: (301) 309-85
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             OPERATING SYSTEM: MSDC
SOFTWARE: ASCII Text
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: UPILING DATE: CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                         TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
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TOPOLOGY: linear
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CITY: Rockville
STATE: Maryland
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                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    175 MGL-----TYPAGREIDELÄHQGHDI-YDFPRAMIKEDNLEFSFSGLKSAFINLHHNA 226
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION:
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 Score 250; DB 3; Length 335; Pred. No. 1.4e-21; Indels 87; Indels
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36;

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Gaps

Search	D Qy	Db Qy	B 8	Qy db
Search completed: November 10, 2005, 16:54:34	181 ASNFYIRRALEILTNATQCTLLCPPPRLCTDNGIMIAWN 219	121 EKEEGIEKGQILSSAADIAATVQHTMACHLVKRTHRAILFCKQRDLLPQNNAVLVASGGV 180	61 LSLIKHPECSTMSGGKAIEHLAKQGNRFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKX 120	1 MEAHALTIRLTNKVEFPFLVLLISGGHCLLALVQGVSDFLLLGKSLDIAPGDMLDKVARR 60
Job time : 21.4761 secs	:  :       :			: : :

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No.
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-Q=/cgn2_1/USPTO_spool_p/US10649273/runat_02112005_091337_15540/app_query.fasta_1.1429
-Q=/cgn2_1/USPTO_spool_p/US10649273/runat_02112005_091337_15540/app_query.fasta_1.1429
-DB=N_Geneseq_16Dec04 -OFMT=fastap -SUFFIX=p2n.rng -MINMATCH=0.1 -LOOPCL=0
-DOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi
-LIST=45 -DCCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15
-MODE=LOCAL -OUTFMT=pto -NORM=ext -HARSIZE=500 -MINLEN=0 -MAXLEN=2000000000
-USER=US10649273 @GCN 1 1 1063 @crunat 02112005_091337 15540 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQÜERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DEV_TIMEDUT=120 -MARN_TIMEDUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
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Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
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ABX70950 standard; cDNA; 1416 BP.
ABX70950;
05-MAR-2003 (first entry)
Novel human cDNA sequence #175.
Human; gene; ss; nervous system disorder; peri
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Human; gene; ss; nervous system disorder; peripheral neuropathy; Huntington's disease; amyotrophic lateral sclerosis; haemophilia; neurodegenerative disease; Parkinson's disease; Albeimer's disease; autoimmune disease; estemic lupus erythematosus; rheumatoid arthritis; insulin-dependent diabetes mellitus; anaemia; thrombocytopaenia; wound; ulcer; burn; bone disorder; osteoporosis; osteoarthritis; stroke; fibrosis; reperfusion injury; infection; allergic rhinitis; asthma; coagulation disorder; cancer; tumour; inflammatory disease; septic shock; Crohn's disease; anaphylaxis; proliferation; chemotactic; differentiation; stem cell growth factor; haematopoiesis; chemokinetic; haemostatic; antiinflammatory; expressed sequence tag; EST.

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Homo sapiens.

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      Feder J,
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Metalloprotease; MP-1; immune disorder; glutamate transport; cancer; motor neuron disorder; amyotrophic lateral sclerosis; ALS; diabetes; reproductive disorder; Kleinfelter's syndrome; germinal cell aplasia; genital wart; metabolic disorder; premature puberty; Kallman syndrome; Cushing's syndrome; neurodegenerative disease; Alzheimer's disease; Parkinson's disease; Huntington's disease; Tourette syndrome; sepsis; liver disease; renal disease; jiver disease; prematoid arthritis; acquired immunodeficiency syndrome; AIDS; pulmonary disease; pneumonia emphysema; cystic fibrosis; vascular disorder; inflammatory disorder; neurological disorder; gene; ds.
                                              05-FEB-2001;
10-APR-2001;
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2001US-0282814P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          aberrant glutamate transport or motor neuron disorder, such as amyotrophic lateral sclerosis (ALS), its juvenile form or an ALS-like condition. The compositions and methods are also useful for diagnosing, prognosticating, treating, ameliorating and/or treating disorders associated with MP-1 activity, e.g. diabetes, cancer, reproductive disorders (e.g. Kleinfelter's syndrome, genital warts, or germinal cell aplasia), metabolic disorders (e.g. premature puberty, Kallman syndrome, or Cushing's syndrome), neurodegenerative diseases (Alzheimer's disease, Parkinson's disease, Huntington's disease or Tourette syndrome), liver and renal diseases and immune disorders (e.g. AIDS, rheumatoid arthritis or sepsis), pulmonary diseases (e.g. pneumonia, emphysema or cystic fibrosis) and vascular, inflammatory and neurological disorders (e.g. Alzheimer's disease or Parkinson's disease). This sequence represents a metalloprotease MPI polynucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention describes an isolated nucleic acid molecule (I) encoding metalloprotease (MP-1). (I) is useful for preventing, treating, or ameliorating a medical condition, particularly an immune disorder, an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New isolated nucleic acid encoding MP-1 protein, useful for preventing, treating, or ameliorating diseases associated with aberrant metalloproteinase activity, e.g. immune, metabolic, inflammatory and neurological disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 1526 BP;
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                 ThrValGlmHisThrMetAlaCysHisLeuValLysArgThrHisArgAlaIleLeuPhe 160
                                                                                          GluLysGluGluGlyIleGluLysGlyGlnIleLeuSerSerAlaAlaAspIleAlaAla 140
                                                                                                                                                                                                                                             LeuAlaLysGlnGlyAsnArgPheHisPheAspIleLysProProLeuHisHisAlaLys 100
                                                                                                                                                                                                                                                                                                                       LeuSerLeuIleLysHisProGluCysSerThrMetSerGlyGlyLysAlaIleGluHis 80
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                                                                                                                                                                                                                        TTGGCCAAACAAGGAAATAGATTTCATTTTGACATCAAACCTCCCTTGCATCATGCTAAA
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                 The present sequence encodes human O-sialoglycoproteinase-like protein (OSGPLP). The present invention also describes: (1) the preparation of the OSGPLP protein; (2) applying the OSGPLP protein in diagnosis; (3) the prevention and/or treatment of related diseases; (4) utilising the OSGPLP protein in screening its agonist, excitomotor and inhibitor and preparing an antibody against the OSGPLP protein: and (5) the use of the OSGPLP polynucleotide sequences, proteins, agonists, excitomotors, inhibitors and antibodies in treating diseases related to the abnormal OSGPLP gene and in preparing the medicine composite for the treatment
                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2002-115090/16.
P-PSDB; ABB05481.
                                                                                                                                                                                                                                                                                                               Claim
                                                                                                                                                                                                                                                                                                                                                                    O-sialogycoproteinase-like protein and encoding polynucleotide, useful for diagnosing, preventing and treating related diseases.
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                                                                  ProGlnLeuLysMetGluIle 267
                                                                                                       ProLysCysProLeuGlyValAspIleSerLysGluValGlyGluAlaSerIleLysVal 260
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                        (first entry)
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novel human metalloprotease MP1

Metalloprotease; MP-1; immune disorder; glutamate transport; cancer; motor neuron disorder; amyotrophic lateral sclerosis; ALS; diabetes; reproductive disorder; Kleinfelter's syndrome; germinal cell aplasia; genital wart; metabolic disorder; premature puberty; Kallman syndrome; cushing's syndrome; neurodegenerative disease; Alzheimer's disease; Parkinson's disease; Huntington's disease; Tourette syndrome; sepsis; liver disease; renal disease; immune disorder; rheumatoid arthritis; acquired immunodeficiency syndrome; AIDS; pulmonary disease; pneumonia; emphysema; cystic fibrosis; vascular disorder; inflammatory disorder; neurological disorder; gene; ds.

19-SEP-2002.

05-FEB-2002; 2002WO-US003353

05-FEB-2001; 10-APR-2001; 2001US-0266518P. 2001US-0282814P.

(BRIM ) BRISTOL-MYERS SQUIBB S

Krystek

Chen Feder J, Nelson TC, Duclos Ή,

P-PSDB;

New isolated nucleic acid encoding MP-1 protein, useful for preventing, treating, or ameliorating diseases associated with aberrant metalloproteinase activity, e.g. immune, metabolic, inflammatory and neurological disorders.

1; Fig 1A-C; 473pp; English.

The invention describes an isolated nucleic acid molecule (I) encoding a metalloprotease (MP-1). (I) is useful for preventing, treating, or CC ameliorating a medical condition, particularly an immune disorder, an aberrant glutamate transport or motor neuron disorder, such as CC amyotrophic lateral sclerosis (ALS), its juvenile form or an ALS-like CC condition. The compositions and methods are also useful for diagnosing, CC prognosticating, treating, ameliorating and/or treating disorders CC associated with MP-1 activity, e.g. diabetes, cancer, reproductive CC disorders (e.g. Kleinfelter's syndrome, genital warts, or germinal cell CC aplasia), metabolic disorders (e.g. premature puberty, Kallman syndrome, CC or Cushing's syndrome), neurodegenerative diseases (Alzheimer's disease, Parkinson's disease, Huntington's disease or Tourette syndrome), liver CC and renal diseases and immune disorders (e.g. Alzheimer's disease) cr sepsis), pulmonary diseases (e.g. AlDS, rheumatoid arthritis CC or sepsis), pulmonary diseases (e.g. pneumonia, emphysema or cystic Cfibrosis) and vascular, inflammatory and neurological disorders (e.g. Alzheimer's disease or Parkinson's disease). This sequence represents a CC metalloprotease MP1 polynucleotide

Sequence 2197 B₽; 681 A; 441 C; 439 **G**; 636 Ή, 0 U; 0 Other;

Percent Similarity: Best Local Similarity: Query Match: No:: 8.75e-147 1385.00 100.00% 100.00% 100.00% Length:
Matches:
Conservative:
Mismatches:
Indels:

US-10-649-273-2\_COPY\_148\_414 (1-267) x ABS76635 (1-2197)

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                      Cytostatic; antiarteriosclerotic; anti-HIV; antiallergic; anticonvulsant; cerebroprotective; antiparkinsonian; nootropic; antiinflammatory; antiulcer; hepatotropic; gynaecological; antibacterial; virucide; protozoacide; antiparasitic; cell proliferative disease; pMOD; protein modification and maintenance molecule; immunogenic fragment; cancer; autoimmune; inflammatory disease; neurological disorder; infection; gastrointestinal; developmental; vesicle trafficking disorder; infection; protein-protein interaction; drug-target interaction;
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22-JUN-2001; 2001US-0300508P.
06-JUL-2001; 2001US-030344SP.
13-JUL-2001; 2001US-030540SP.
09-AUG-2001; 2001US-0311442P.
24-AUG-2001; 2001US-0314821P.
29-AUG-2001; 2001US-0318592P.
03-MAY-2002; 2002US-037820SP.
                                                                                                                                                                                                                                                                                                            Gandhi AR, Kable AE, Swarnakar A, Hafalia AJA, Tran B, Dugga: Warren BA, Ison CH, Honchell CD, Nguyen DB, Lu DAM, Lee EA, Forsythe IJ, Barroso I, Ramkumar J, Griffin JA, Li JX, Yang Thangavelu K, Gietzen KJ, Ding L, Baughn MR, Borowsky ML, Yaw Walia NK, Mason PM, Gururajan R, Lee S, Becha SD, Lee SY, T. Elliott VS, Luo W, Sprague WW, Tang YT, Lu Y, Zebarjadian Y;
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DB; ABJ26654.
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Duggan ee EA, Y Yang J; L, Yao MG; Tran UK;

Yue BM.

New isolated human PMOD polypeptide and polynucleotide, useful for diagnosing, treating and preventing diseases or conditions associated with the aberrant PMOD expression, e.g. cancer, AIDS, atherosclerosis

Claim 91; Page 211; 225pp; English.

The invention relates to an isolated polypeptide comprising: any of 28 CC sequences of 48-1256 amino acids; a natural amino acid sequence at least CC 90% identical to the 28 amino acids sequences, 94% identical to a sequence CC of 703 or 267 amino acids, 96% identical to a sequence of 414 amino CC acids, or 97% identical to a sequence of 422 amino acids, all given in CC the isolated polypeptide. The polypeptides and polymucleotides are useful CC in diagnosing, treating and preventing diseases or conditions associated CC with the decreased expression of protein modification and maintenance CC molecules (PMOD), such as cell proliferative diseases (e.g. AIDS, CC allergies), neurological disorders (e.g. stroke, Parkinson's disease, epilepsy), gastrointestinal (e.g. ulcer, cirrhosis), reproductive (e.g. crocer), CC endometriosis), developmental (e.g. ulcer, cirrhosis), reproductive (e.g. crocer), CC infections (e.g. bacterial, viral, parasitic, protozoal). These are also CC useful in assessing the effects of exogenous compounds on the expression of nucleic acid and amino acid sequences of PMOD. The PMOD or its CC rargments are useful in screening compounds for effectiveness as agonist or antagonist of the polypeptide, or in altering the expression of the CC target polynucleotide and compounds that specifically bind too modulate the activity of the polypeptide. The microarray is useful in monitoring compounds compounds on protein protein interactions, drug-target interactions, and CC encoding a human pMOD protein for the invention a human PMOD protein of the invention

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BP; 780 A; 489 Ç 509 ç, 794 7 0 U; 0 Other;

Percent Similarity:
Best Local Similarity:
Query Match:
DB: Alignment 8 0 :: 100.00% 1.09e-146 1385.00 Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:

US-10-649-273-2\_COPY\_148\_414 (1-267) x ABT23207 (1-2572)

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Human; adenosine deaminase; seven transmembrane domain receptor; cancer; 7TM; glycoprotease; immune disorder; IgA deficiency; allergy; arrhythmia; rheumatoid arthritis; diabetes; atherosclerosis; cardiovascular disorder; hypertension; ischaemic heart disease; obesity; myocardial infarction; endothelial cell disorder; Grave's disease; psoriasis; brain disorder; parkinson's disease; hahematopoietic disorder; cerebral oedema; metabolic disorder; liver disorder; platelet disorder;
                                                                                                                                                                                                                                                                     Human glycoprotease 28472 cDNA.
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The present invention relates to novel 38650, 28472, 5495, 65507, 81588 CC or 14354 nucleic acid molecules which encode adenosine deaminase, glyco-cc protease or seven transmembrane domain (77M) receptor family members. CC Sequences of the invention are useful in diagnosing and treating cancer or aberrant cellular proliferation and/or differentiation (e.g. colon or CC lung cancer), inmune disorders (e.g. selective IAA deficiency, rheumatoid CC arthritis, diabetes, allergy), heart or cardiovascular disorders (e.g., CC hypertension, atherosclerosis, arrhythmias, ischaemic heart disease, CC myocardial infarction, thrombus) including endothelial cell disorders (e.g., psoriassis, Grave's disease), haematopoietic disorders, brain CC disorders (e.g. cerebral oedema, Parkinson's or Alzheimer's disease), CC gain and metabolic disorders (e.g. obesity), liver disorders or platelet CC disorders. They are also useful in screening assays, predictive medicine (e.g. diagnostic assays, prospostic and therapeutic methods. The cultivation of consic biology and as surrogate markers. Sequences of the invention are calso used in gene therapy. The present sequence is human glycoprotease
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                                                                                                                                                                                                                                                                                                                                                                                                                                  New 38650, 28472, 5495, 65507, 81588 or 14354 nucleic acid molecules, useful for diagnosing and treating cancer, immune, cardiovascular, hematopoietic, brain, pain, metabolic, liver or platelet disorders, and in pharmacogenomics.
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08-NOV-2000; 2000US-0246772P
15-NOV-2000; 2000US-0249185P
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/note= "This region is specifically claimed
6 in claim 1 of the specification"
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Best Local Similarity:
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                                                                                                                                                                                                                                                                                                                     Query
                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to an isolated 38650 (encoding adenosine CC deaminase), 28472 (encoding a glycoprotease), 5495 (encoding a 7 CC transmembrane receptor), 65507, 81588 or 14354 nucleic acid molecule (or CC a sequence which is at least 60% identical to the six nucleic acids or CC naturally occurring variants, or a DNA insert of the plasmid deposited CC with the American Type Culture Collection as Accession No. not defined in CC the specification, which encodes the amino acid sequence). Also included CC are a host cell containing the nucleic acids (used to produce the protection) the encoded proteins, an antibody that selectively binds to CC the polypeptide, and identifying a compound that binds to/modulates the CC activity of the polypeptide. The nucleic acid molecules, polypeptides and CC methods are useful for diagnosing, treating cancer, aberrant cellular CC proliferation and/or differentiation, immune disorders, heart disorders, CC cardiovascular disorders including endothelial cell disorders, pain CC cand metabolic disorders, blood vessel disorders, brain disorders pain CC and metabolic disorders, liver disorders and platelet disorders (many camples of these disorders are given in the specification). The present of the collaboration of the collaboration of the present collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collaboration collabo
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08-NOV-2000;
15-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 1820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New isolated 38650, 28472, 5495, 65507, 81588 and 14354 nucleic acid molecules, useful for diagnosing, treating cancer, pain, or immune, heart, endothelial cell, hematopoeitic, blood vessel, brain, metabolic and liver disorders.
                                                                                                                                                                                                                                                                                                                                                                                                          No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 2; Fig 8; 90pp; English.
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(KAPE/) KAPELLER-LIBERMANN
(GLUC/) GLUCKSMANN M A.
                                                                                                                                                                                                                                                                                                                       Match:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cDNA encoding
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                                                                                                                                                                                                                                                                                                    Parkinson's disease; anorexia
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147. .1391
                               /product= "Glycoprotease 28472"
/note= "Specifically claimed in
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New adenosine deaminase, glycoprotease and seven transmembrane domain nucleic acids and polypeptides, designated 38650, 28472, 5495, 65507, 81588 and 14354, useful for treating e.g. leukemias, Hodgkin's disease
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08-NOV-2000; 2000US-0246772P
15-NOV-2000; 2000US-0249185P
Sequence 1821
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                Isogai T, Sugiyama T,
Yamamoto J, Isono Y,
Seki N, Yoshikawa T,
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24-JAN-2002; 2002US-0350435P.
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Otsuka M, Nagahari K, Mas
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New polynucleotides encoding full-length polypeptides, e.g. secretory and/or membrane proteins, useful for developing medicines for diseases which the gene is involved, or as target molecules for gene therapy.
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                 IleGluArgLeuArgAlaGlyLeuGlyIleLeuHisAspIleGluGlyIleArgTyrGlu
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US-10-649-273-2_COPY_148_414 (1-267) x ADQ24627 (1-2890)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Early detection of soft tissue sarcoma comprises determining expression of a gene in a first soft tissue sample and a normal soft tissue sample and comparing the gene expression, also useful in treating soft tissue
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                                     diagnostic and therapeutic polynucleotide; dithp; antiarteriosclerotic; antiinflammatory; cerebroprotective; antilipaemic; antidiabetic; immunosuppressive; neuroprotective; noutropic; neuroleptic; tranquilize; osteopathic; antiarthritic; antirheumatic; cytostatic; hepatotropic; virucide; haemostatic; anti-HIV; antithyroid; thyromimetic; virucide; haemostatic; anti-HIV; antithyroid; thyromimetic;
             dermatological; antibacterial; fungicide; antiparasitic; anticonvulsant; thrombolytic; anticoagulant; anorectic; vasotropic; antiulcer;
                                                                                                                          Human diagnostic and therapeutic polynucleotide (dithp), SEQ
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Homo sapiens

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comprising a naturally occurring polynucleotide seq cidentical to the dithp polynucleotide seq cidentical; or an RNA equivalent of any of the polynucleotide which didners are the dithp polynucleotide which dentical; or an RNA equivalent of any of the polynucleotide which cidentical; or an RNA equivalent of any of the polynucleotide which didners are the following antiarteriosclerotic, antiinflammatory, cerebroprote antidiabetic, immunosuppressive, neuroprotective, anticompathic, antiarthritic, antirheum chematotropic, virucide, haemostatic, anti-HIV, antidermatory cerebroprotectice, vasotropic, or virucide, haemostatic, anti-HIV, antidermatory cerebroprotectice, vasotropic, novel DiTHP polynucleotides polypeptide, antiparas thrombolytic, anticoagulant, anorectic, vasotropic, novel DiTHP polynucleotides polypeptide, antiparas thrombolytic, anticoagulant, anorectic, vasotropic, novel DiTHP polynucleotides polypeptide can be used protein replacement therapy. The dithp polynucleotic polypeptides are useful for diagnosing, preventing associated with the expression of human molecules ciseases include cancers (e.g. adenocarcinoma, leuk cancer, breast cancer, cervix cancer, bone cancer, cancer, bone cancer, cancer, bore cancer, cancer, bore cancer, cancer, bone cancer, cancer, bore cancer, cancer, crantosis, polycythemia thrombocytopenia), autoimmune/inflammatory disorders, cancer, stable or the polycythemia content of the stable of thrombosis, hypopituitarism, hypogonadism, gigantis chrombosis, hypogonadism,
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Peralta CH,
Kristnam SR,
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P-PSDB;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 1; SEQ ID NO 100; 634pp; English.
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17-JAN-2002; 2002US-0349413P.
17-JAN-2002; 2002US-0349946P.
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ynucleotide sequence the invention.
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DB; ADE31156.
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ason O, Yap PE, Amshey SR, Dam
Lewis SA, Chen A, Marwaha R,
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Kolluru V,
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Alignment Scores:

Sequence 3358 BP; 1105 A; 577 C; 601 G; 1075

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2169 CCTTTGCATCTTTTCGTTTCACAGTATTTAATTTTTATGACTCTAAAAAATATGTTTCTTT 2110	
y 54Leu 54	· O III o Other:
D 2229 GTATAGCATGTTTTATTCATTCAGGGGTTTTTTGTTTGTT	human dithp DNA sequences
y 53 53	g resistance), or Qy
2289 ATCATAAGGAACAGGGTTGTCTGCTTACCTGAATATCAGCTATAGTCTATATTTGCCAAA 2230	utzfeldt-Jakob disease, Db
y 53 53	ers (e.g. ischaemic Qy
2349 CCAACCAATAGAAGAGCAAACATAGACAGGGGCAGTGATTGGCCTCTTATTGTTCGGGTC 2290	antism, goiter) metabolic Db
y 53 53	n), developmental disorders Qy
2409 ACAAGTTCTTATTATTGACGTTCATCATTAAGCAGTTATTGTCAACTTCAAGCCCATTTT 2350	steoarthritis, rheumatoid  atosus). infections (e.g.
<i>ty</i> 53 53	orders (e.g. AIDS,  Graves' dispass
2469 ATAGGAAACTACAACAACAACGACGCTGCTTCCCCACAGTGAAATAATAGGAAGTATAGG 2410	(e.g. arteriosclerosis, Db
<i>ty</i> 53 53	leukaemia, melanoma, brain Qy
Db 2529 CAGACAGGGTCCCCCCGCACCCCCTTTGTTTTAGAATACTACAGAGGCTACTGCCATAT 2470	or treating diseases In particular these
<i>ty</i> 53 53	used, unit thereto, and Qy
Db 2589 TTAACATAAGGACATTAAAGATGCAATGCACAGAATTAAATCACACAATTACTTAC	itic, anticonvulsant,
Qy 53 53	
Db 2649 AGAACGTGCTTCGTAAACTAACATACTGCAAAAAAGGTAAAATAAGAGAAATATATAT	
Qy 53 53	entioned
Db 2709 CATAAAGGCTGAAATAGTTTGCAGATACAGTTATGTATTTTGCCAAATAATGTATGT	leotide complementary to
Qy 53 53	
Db 2769 GTACACGAATTTATAATTCTTAGCCTTTCTTAATAAAATGGTAAGAGGTTCATATCTGTA 2710	nd of 195-7798
Qy 53 53	n diagnostic and
Db 2829 TTTTATCTTAGTAAACTGAACACAAAATTCACATATGGTGAGAAAAAATAGAAAGCAGTA 2770	ם
Qy 53 53	Ю
Db 2889 TGTCCATTTCAACTAAGTAGCAATAGATGTGCTACCACCATTCACCTAAATATTTCTGAA 2830	es and polypeptides,
Qy 53 53	
2949 C	
Qy 50 ProGlyAspMet 53	an RY, Urashka ME;
3008 TGGGCATTAGTTCAAGGAGTTTCAGATTTTCTGCTTCTTGGAAAGTC-TTGGACATAGCA	Jackson JL;
Qy 30 LeuAlaieuValGlnGlγValSerAgpPheLeuLeuLeuGlγLγsSerLeuAspIleAla 49	
Qy 10 LeuThrAsnLysValGluPheProPheLeuValLeuLeuIleSerGlyGlyHisCysLeu 29 :::	
US-10-649-273-2_COPY_148_414 (1-267) x ADE31345 (1-3358)	
Pred. No.:       2.99e-102       Length:       3358         Score:       995.50       Matches:       250         Percent Similarity:       44.82%       Conservative:       1         Best Local Similarity:       44.64%       Mismatches:       7         Query Match:       71.88%       Indels:       307         DB:       10       Gaps:       2	

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ABQ75508
ID ABQ75
XX ABQ75
AC ABQ75
XX O7-NO
DT O7-NO
DE Murin
XX Murin
KW Murin
KW CAPN5
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                                                                                                                                                         CAPN5; tryptase 4; sialoglycoprotease; enzyme; genetic disease; neurological; neuropsychological; psychotic illness; transgenic animal;
06-DEC-2000;
06-DEC-2000;
                                      05-DEC-2001;
                                                                                                                    Mus musculus.
                                                                                                                                                                                     Murine; mouse; protease; calcium activated neutral protease type 5;
                                                                                                                                                                                                               Murine sialoglycoprotease-like gene sequence SEQ ID NO:7.
                                                                                                                                                                                                                                          07-NOV-2002
                                                                                                                                                                                                                                                                    ABQ75508
                                                                                                                                                                                                                                                                                            ABQ75508 standard;
                                                                 13-JUN-2002
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Novel transgenic animal, comprising a disruption in protease target gene, is useful for identifying agents that ameliorates a phenotype associated with a disruption in a protease target gene.

Example 3; Fig 7; 62pp; English.

The present invention describes a non-human transgenic animal (I) C comprising a disruption in a protease target gene (PG) selected from CC calcium activated neutral protease target gene (PG) selected from CC calcium activated neutral protease type 5 (CAPNS) gene, tryptase 4 gene CC and sialoglycoprotease-like gene. Also described is a targeting construct (CI), comprising a first polymucleotide sequence homologous to at least a CC first portion of PG, a second polymucleotide sequence homologous to at CC least a second portion of PG and a selectable marker. (II) is useful for CC gene, by introducing (II) into a cell, introducing the cell into a CC blastocyst, implanting the resulting blastocyst into a pseudopregnant CC mouse, where the pseudopregnant mouse gives birth to a pseudopregnant CC cand breeding the chimeric mouse (II) is useful for identifying an agent that modulates the expression or function CC at protease target gene, by administering an agent to (I) and CC determining whether the expression or function of the disrupted protease target gene in (I) is modulated. (I) is also useful for testing the CC efficacy of proposed genetic and pharmacological therapies for human CC genetic diseases, such as neurological, neuropsychological or psychotic illness. The present sequence represents murine slaloglycoprotease-like gene sequence, which is used in an example from the present invention

Sequence 1572 B₽; 459 A; 337 Ç 340 G; 429 T; 0 U; 7 Other;

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                                                   TIGGCCAAAGACGGAAATAGATTCCATTTTACTATCCACCTATGCAGAATGCTAAG
                                                                                 LeuAlaLysGlnGlyAsnArgPheHisPheAspIleLysProProLeuHisHisAlaLys
                                                                                                               CTTTCTTTAATCAAACATCCAGAATGTTCTACAATGAGTGGTGGAAAAGCTATAGAACAG
                                                                                                                              LeuSerLeuIleLysHisProGluCysSerThrMetSerGlyGlyLysAlaIleGluHis
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78.95%
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Conservative:
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GluLysGluGluGlyIleGluLysGlyGlnIleLeuSerSerAlaAlaAspIleAlaAla

140 803 120 743 100 68

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The invention relates to isolated polynucleotide (I) and polypeptide (I sequences. (I) is useful as hybridisation probes, polymerase chain reaction (PCR) primers, oligomers, and for chromosome and gene mapping, and in recombinant production of (II). The polynucleotides are also use in diagnostics as expressed sequence tags for identifying expressed
                                                                                                                                                                                                                                                                                New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess
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23-AUG-2000;
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food supplement; medical imaging; diagnostic; genetic disorder;
                                                                                                                                                                                            Claim 1; SEQ ID NO 20426; 103pp; English.
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2000US-00649167.
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Best Local Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 2734 BP;
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                                                                                                          AspIleGluGlyIleArgTyrGluProLys-----CysProLeuGlyVal
                                                                                                                                                                                GlyIleMetIleAlaTrpAsnGlyIleGluArgLeuArgAlaGlyLeuGlyIleLeuHis
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                                                                                                                     GCTATTCTGTTTTGCAAGCAGAAATTTGCTCTCTCCAGCTAACGCAGTATTAGTTGTA
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468.00 78.86% 74.80% 33.79% 1.18e-43

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371 92 5 26

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                                                                              CC associating nucleic acid sequences of unknown function with particular CC sub-population profiles. Specifically, it refers to classifying an CC unknown multi-lineage affiliated gene by collecting hybridisation data to develop a gene expression map, in order to determine the discrete sub-copulation where it is expressed. The present invention describes methods CC for predicting the lineage commitment of genes associated with the self-cremewing haematopoietic (blood) stem cells (HSCs), as well as the non-committed the common myeloid progenitors (MPPs), common lymphoid progenitors (CLPs) and common myeloid progenitors (CMPs), which are collectively creferred to as bone marrow stem cells populations. As such, these methods CC can be used to identify associated multi-lineage affiliated genes and thence the underlying molecular mechanisms in physiological haematopoietic development. This polynucleotide sequence is DNA associated with a murine company common contact and the contact of the invention.
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Minimum
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-MODEL=frame+_p2n.model -DEV=xlp
-Q-/cgn2 1/USPTO_spool_p/US10649273/runat_02112005_091338_15550/app_query.fasta_1.1429
-Q-/cgn2 1/USPTO_spool_p/US10649273/runat_02112005_091338_15550/app_query.fasta_1.1429
-Q-/cgn2 1/USPTO_spool_p/US10649273/runat_02112005_091338_15550/app_query.fasta_1.1429
-Q-/cgn2 1 -Q-/cgn2 1 - ACCOPET 0
-UNITYS=bite -START=1 -END=-1 -MATRIX=blosum62 -TRANSS=human40.cdi -LICT=45
-DCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15 -MODE=LOCAL
-OUTFMT=pco -NORM-ext -HEARSIZE=500 -MINLEN=0 -MAXLEN=2000000000
-USER=US10649273_GCGN 1_7742_erunat_02112005_091338_15550 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEOUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
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Tang, Y.T., Zhou, P., Goodrich, R., Liu, C., Asundi, V., Zhang, Y., Zhao, Q.A., Yang, Y., Xue, A.J., Wehrman, T., Wang, D. and Drmanac, R.T.
Nucleic acids and polypeptides
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Sequence 177 from patent US 6743619.
AR541929
AR541929.1 GI:53934000 "
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Patent: US 6743619-A 177 01-JUN-2004;
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1 (bases 1 to 1526) Chen, J., Feder, J.N., Nelson, T.C., Krystek, S.R. and Duclos, Polynucleotides encoding a novel metalloprotease, MP-1
                     Unknown.
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Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,

Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,

Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,

Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,

Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,

Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,

Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,

Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,

McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,

Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.M.,

Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,

Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,

Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,

Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,

Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,

Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E.,

Schnerth, A., Schein, J.E., Jones, S.J. and Marra, M.A.,

Generation and initial analysis of more than 15,000 full-length

human and mouse CDNA sequences
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CDNA Library Arrayed by: The I.M.A.G.B. Consortium (LLNL)
DNA Sequencing by: National Institutes of Health Intramural
Sequencing Center (NISC),
Gaithersburg, Maryland;
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Contact: nisc_mgc@nhgri.nih.gov
Akhter,N., Ayele,K., Beckstrom-Ste
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On Dec 19, 2003 this sequence version replaced
Contact: MGC help desk
Email: cgapbs-r@mail.nih.gov
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Submitted (30-JUL-2001) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
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                     CysLysGlnArgAspLeuLeuProGlnAsnAsnAlaValLeuValAlaSerGlyGlyVal 180
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/db_xref="GI:15080282"
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|db_xref="CDD:pfam00814"
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Chen,J., Feder,J.N., Nelson,T.C., Krystek,S.R. an
Polynucleotides encoding a novel metalloprotease,
Patent: US 6642041-A 1 04-NOV-2003;
    Location/Qualifiers
    1. .2197
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Chen, J., Feder, J.N., Nelson, T.C., Krystek, S.R. and
Polynucleotides encoding a novel metalloprotease, M
Patent: US 6642041-A 21 04-NOV-2003;
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                                                                                ProGlnLeuLysMetGluIle 267
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LeuLeuGlyLysSerLeuAspIleAlaProGlyAspMetLeuAspLysValAlaArgArg
                                CTTTTGATTTCTGGAGGTCACTGTCTGTTGGCATTAGTTCAAGGAGTTTCAGATTTTCTG
                                          LeuLeuI1eSerGlyGlyHisCysLeuLeuAlaLeuValGlnGlyValSerAspPheLeu
                                                                    ATGGAGGCTCATGCACTTACTATTAGGTTGACCAATAAAGTAGAATTTCCTTTTTTAGTT
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1. .1387
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         2 (bases 1 to 1387)
Chen, J.M.
Direct Submission
Submitted (27 OCT-2000) Chen J.M., F
Laboratory, The Babraham Institute,
UNITED KINGDOM
                                                                                                                               Chen, J.M., Fortunato, M. and Barrett, A.J. Cloning and sequencing of a second human
                                                                                                       sialoglycoprotease homologue
Unpublished
                                                                                                                                                                             Eukaryota; Metazoa;
Mammalia; Butheria;
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Location/Qualifiers
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Primates;
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             CGGGCTATTCTGTTTTGTAAGCAGAGAGACTTGTTACCTCAAAATAATGCAGTACTGGTT
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/protein_id="CAC14666.1"
/db_xref="GG1:11071727"
/db_xref="GOA:Q9H4B0"
/db_xref="UniProt/TrEMBL:Q9H4B0"
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                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota;
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Homo sapiens
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                                                                      LeuLeuIleSerGlyGlyHisCysLeuLeuAlaLeuValGlnGlyValSerAspPheLeu
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                                            LeuSerLeuI1eLysHisProGluCysSerThrMetSerGlyGlyLysAlaI1eGluHis
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                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
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Leiby, K.R., Kapeller-Libermann, R. and Glucksmann, M. 38650, 28472, 5495, 65507, 81588 and 14354 methods of human proteins and uses thereof Patent: WO 02074960-A 4 26-SEP-2002; Millennium Pharmaceuticals, Inc. (US)
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGTAAGCAGAGACTTGTTACCTCAAAATAATGCAGTACTGGTTGCATCTGGTGGTGTC
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    DC050172
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                                                                                                           ProGlnLeuLysMetGluIle 267
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AUTHORS
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SOURCE
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                                                                                                                                                      source
                                                                                                                                                                     Clone distribution: MGC clone distribution information can be found through the I.M.A.G.B. Consortium/LLML at: http://image.llnl.gov Series: IRAK Plate: 123 Row: d Column: 22
This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 21312463
Location/Qualifiers
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organism="Mus musculus"

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Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,

Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,

Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,

Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,

Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,

Scheetz, T.B., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,

Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,

Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,

McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,

Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,

Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,

Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,

Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,

Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,

Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, JJ., Myers, R.M.,

Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A.

Generation and initial analysis of more than 15,000 full-length
DNA Sequencing by: National Institutes of Health Intramural Sequencing Center (NISC), Gaithersburg, Maryland; Gaithersburg, Maryland; Web site: http://www.nisc.nih.gov/
Contact: nisc_mgc@nhgri.nih.gov/
Akhter,N., Ayele,K., Beckstrom-Sternberg,S.M., Benjamin,B., & Rheter,N., Ayele,K., Beckstrom-Sternberg,S.M., Benjamin,B., Blakesley,R.W., Bouffard,G.G., Breen,K., Brinkley,C., Brooks,S., Blakesley,R.W., Granite,S., Guan,X., Gupta,J., Haghighi,P., Dietrich,N.L., Granite,S., Kwong,P., Laric,P., Legaspi,R., Maduro,O.L., Masiello,C., Maskeri,B., Mastrian,S.D.,McCloskey,J.C., McDowell,J., Pearson,R., Stantripop,S., Thomas,P.J., Touchman,J.W., Tsurgeon,C., Vogt,J.L., Walker,M.A., Wetherby,K.D., Wiggins,L., Young,A., Zhang,L.-H. and Green,E.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Direct Submission
Submitted (15-SEP-2003) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Gilbert Smith, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: MGC help desk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NIH-MGC Project URL: http://mgc.nci.nih.gov
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Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
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SCDDTGAAVVDETGNVLGEALHSQTQVHLKTGGIVPFVAQQLHRENIQRIVEETSAS
RITESDLSA IATTIKFCLALSLGVGLSFSLQLVNRFKKPFIPHHMEAHALTIRLTNK
VEPPFLVLLISGGHCLLALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECST
NSGGKAA EHLAKDGNRFHFIN PHPMANKNCDFSFTGLQHITDKLITHKEKEEGIEKG
QILSSAADIAAAVQHATACHLAKTHAAILFCXQKNLLSPANAVLVVSGGVASNLVIR
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possible chaperone activity [Posttranslational
modification, protein turnover, chaperones]"
/db_xref="CDD:COG0533"
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RS Strausberg, R.L., Feingold, S.A., Grouse, L.H., Derge, J.G.,
RIAUSBER, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
Altschul, S.F., Zeeberg, B., Buetcow, K.H., Schaefer, C.F., Bhat, N.K.,
Altschul, S.F., Zeeberg, B., Buetcow, K.H., Schaefer, C.F., Bhat, N.K.,
Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,
Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,
Scheetz, T.B., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
McKerran, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,
McKerran, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,
Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,
Villalon, D.K., Muzny, D.M., Sodergren, B.J., Lu, X., Gibbs, R.A.,
Villalon, D.K., Muzny, D.M., Sodergren, B.J., Lu, X., Gibbs, R.A.,
Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,
Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,
Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,
Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,
Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E.,
Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A.
Generation and initial analysis of more than 15,000 full-length
human and mouse cDNA sequences
B. Collaboration and Marra, M.A.
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                                                                                                                                                                                                                                                                                           NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Jeffrey E. Green, M.D.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium
DNA Sequencing by: Genome Sequence Centre,
Steven Jones, Jennifer Asano, Ian Bosdet, Yaron Butterfield, Susanna Chan, Readman Chiu, Chris Fjell, Erin Garland, Ran Guin, Letticia Hsiao, Martin Krzywinski, Reta Kutsche, Oliver Lee, Soo Sen Lee, Victor Ling, Carrie Mathewson, Candice McLeavy, Steven Ness, Pawan Pandoh, Anna-Liisa Prabhu, Parvaneh Saeedi, Jacqueline Schein, Duane Smailus, Michael Smith, Lorraine Spence, Jeff Stott, Michael Thorne, Miranada Tsai, Natasja van den Bosch, Jill Vardy,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (25-OCT-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                  BC Cancer Agency, Vancouver, info@bcgsc.bc.ca
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Series: IRAK Plate: 86 Row: f Column: 12.
Location/Qualifiers
                                                                            MetGluAlaHisAlaLeuThrIleArgLeuThrAsnLysValGluPheProPheLeuVal
IleGluArgLeuArgAlaGlyLeuGlyIleLeuHisAspIleGluGlyIleArgTyrGlu
                        TGCAAGCAGAAAAATTTGCTCTCTCCAGCTAACGCAGTATTAGTTGTATCTGGAGGTGTT
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/tissue_type="Liver, normal.
/clone_lib="NCI_CGAP_Li9"
/lab_host="DH10B"
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/strain="FVB/N"
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Patent: EP 1293569-A 400 19-MAR-2003;
Helix Research Institute (JP); Research
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Sequence 400 from Patent EP1293569.
AX713716
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Yamamoto,J.I., Isono,Y., Hio,Y., Otsuka,K., Nagai,K., Irie,R.,
Tamechika,I., Seki,N., Yoshikawa,T., Otsuka,M., Nagahari,K. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Biotechnology (JP)
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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/mol_type="unassigned DNA"
/db_xref="taxon:9606"
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Sekine, M., Obayashi, K., Sato, H., Nagai, K., Kimura, K., Maktantsu, A., Hayashi, K., Sato, H., Nagai, K., Kimura, K., Makta, H., Sekine, M., Obayashi, M., Nishi, T., Shibahara, T., Tanaka, T., Ishii, S., Yamamoto, J., Saito, K., Kawai, Y., Isono, Y., Nakamura, Y., Nagahari, K., Murakami, K., Yasudda, T., Iwayanagi, T., Wagatsuma, M., Nagatsuma, M., Nanda, K., Yokai, T., Furuya, T., Kikkawa, R., Omura, Y., Abe, K., Kamihara, K., Katsuta, M., Sato, K., Kikkawa, R., Omura, Y., Abe, K., Kamihara, K., Katsuta, M., Sato, K., Kikkawa, R., Omura, Y., Tanai, H., Kimata, M., Watanabe, M., Mirakawa, K., Fujimori, K., Tanai, H., Kimata, M., Watanabe, M., Mirakawa, M., Hotuta, T., Kusano, J., Kanehori, K., Takahashi-Fujii, A., Hara, H., Tanase, T., Nomura, Y., Togiya, S., Komai, F., Hara, R., Takenchi, K., Arita, M., Imose, N., Musashino, K., Yuuki, H., Oshima, A., Sasaki, N., Aotsuka, S., Yoshikawa, Y., Matsunawa, H., Ichihara, T., Sasaki, N., Sano, S., Moriya, S., Moniyama, H., Satoh, N., Takamabe, T., Sasaki, N., Sano, S., Moriya, S., Senoh, A., Mizoguchi, H., Goto, Y., Shimizu, F., Wakebe, H., Hishigaki, H., Watanabe, T., Suyiyama, A., Tanigami, A., Fujiwara, T., Ono, T., Yamada, K., Fujii, Y., Ozaki, K., Hirao, M., Ohmori, Y., Kawabata, A., Hikiji, T., Kobatake, N., Itakura, S., Fukuzumi, Y., Fujimori, Y., Kawabata, R., Pujii, Y., Ozaki, K., Mizuno, T., Morinaga, M., Sasaki, M., Togashi, T., Oyama, M., Hata, H., Watanabe, M., Sasaki, M., Hata, H., Watanabe, M., Nakajwa, K., Okumura, K., Nakajwa, K., Okumura, K., Nakajwa, K., Okumura, K., Nakajwa, K., Okumura, K., Nakajwa, K., Okumura, K., Nakajwa, K., Okumura, K., Nakajwa, K., Okumura, K., Nakajwa, K., Okumura, K., Nakajwa, K., Okumura, K., Nakajwa, K., Okumura, K., Nakajwa, K., Okumura, K., Nakajwa, K., Okumura, K., Nakajwa, K., Okumura, K., Nakajwa, K., Okumura, K., Nakajwa, K., Okumura, K., Nakajwa, K., Okumura, K., Nakajwa, K., Okumura, K., Nakajwa, K., Okumura, K., Nakajwa, K., Nakajwa, K., Okumura, K., Nakajwa, K., Nakajwa, K., Nakajwa, K., Nakajwa, K., Nakajwa
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Homo sapiens cDNA FLJ30879 fis,
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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Submitted (24-OCT-2001) Takao Isogai, Helix Research Institute,
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89.51%
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                                                                           Length:
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Conservative:
Mismatches:
Indels:
                                                                           2208
239
0
4
24
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60

40 904

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DEFINITION
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LOCUS
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ORGANISM
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Strausberg, R.L., Feingold, B.A., Grouse, L.H., Derge, J.G.,
Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,
Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,
Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,
Scheetz, T.B., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,
McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,
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Fahey, J., Helton, B., Ketteman, M., Madan, A., Rodrigues, S.,
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Rattus norvegicus
Rattus norvegicus
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BC078974.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BC078974 1546 bp mRNA Rattus norvegicus cDNA clone IMAGE:7111906,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABNCYSASpPheSerPheThrGlyLeuGlnHisValThrAspLysIleIleMetLysLys 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AlaSerAsnPheTyrIleArgArgAlaLeuGluIleLeuThrAsnAlaThrGlnCysThr 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CysLysGlnArgAspLeuLeuProGlnAsnAsnAlaValLeuValAlaSerGlyGlyVal 180
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AUTHORS
TITLE
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                                  밁
                                                                                                                      US-10-649-273-2_COPY_148_414 (1-267)
                                                                                                                                                                                           Query
                                                                                                                                                                                                                Best Local Similarity:
                                                                                                                                                                                                                                                                                      Pred.
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PUBMED
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::
                                  585
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                                MetGluAlaHisAlaLeuThrIleArgLeuThrAsnLysValGluPheProPheLeuVal
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Clone distribution: MGC clone distribution information can through the I.M.A.G.B. Consortium/LLNL at: http://image.lln Series: IRAK Plate: 182 Row: f Column: 6
This clone was selected for full length sequencing because passed the following selection criteria: Hexamer frequency analysis, Similarity but not identity to protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CDNA Library Preparation: Express Genomics CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Sequencing Group at the Stanford Human Center, Stanford University School of Medicine, Stanford, Web site: http://www-shgc.stanford.edu Contact: (Dickson, Mark) mcd@paxil.stanford.edu Dickson, M., Schmutz, J., Grimwood, J., Rodriquez, A., and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Direct Submission

Direct Submission

Submitted (02-AUG-2004) National Institutes of Health, Mammalian Submitted (02-AUG-2004) Regional Cancer Gene Collection (MGC); Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dickson,M.C., Rodriguez,A.C., Grimwood,J., Schmutz,J., Myers,R.M., Butterfield,Y.S., Krzywinski,M.I., Skalska,U., Smailus,D.E., Schnerch,A., Schein,J.E., Jones,S.J. and Marra,M.A. Generation and initial analysis of more than 15,000 full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Howard J:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NIH-MGC Project URL: http://mgc.nci.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: MGC help desk
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             human and mouse cDNA sequences Proc. Natl. Acad. Sci. U.S.A. 9
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92.56%
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Mus musculus, clone IMAGE:1327545,
BC051211
BC051211.1 GI:29881634
                                                              NIH-MGC Project URL: http://m
Contact: MGC help desk
Email: cgapbs-r@mail.nih.gov
                                                                                                                          Direct Submission
Submitted (14-APR-2003) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
1 (bases 1 to 1109)
Tissue Procurement: Marcello cDNA Library Preparation: M. cDNA Library Arrayed by: The DNA Sequencing by: Institute
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 Bento Soares, Ph.D.
Bento Soares, University of Iowa
I.M.A.G.E. Consortium (LLNL)
for Systems Biology
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Series: IRAK Plate: 113 Row: b Column: 1
This clone was selected for full length sequencing because
passed the following selection criteria: Hexamer frequency
analysis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 http://www.systemsbiology.org
contact: amadan@systemsbiology.org
Anup Madan, Jessica Pahey, Erin Helton, Mark Ketteman, Anuradha
Madan, Stephanie Rodrigues, Amy Sanchez and Michelle Whiting
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     GTTGCAAGTAACTTGTACATCCGAAAAGCATTGGAAATTGTCGCAAATGCAACGCAGTGC
                    ValAlaSerAsnPheTyrIleArgArgAlaLeuGluIleLeuThrAsnAlaThrGlnCys
                                                                                          PheCysLysGlnArgAspLeuLeuProGlnAsnAlaValLeuValAlaSerGlyGly
                                                                                                                                      GCTGCGGTACAGCATGCAACAGCGTGCCACCTTGCGAAAAGAACACATCGCGCTATTCTG
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                                                                    /tissue_type="Thymus gland, mous
/clone_lib="Soares_thymus_2NDMT"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /mol_type="mRNA"
/strain="C57BL/6J"
/db_xref="taxon:10090"
/clone="IMAGE:1327545"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Archosauria; Aves; Neognathae; Galliformes; Phasianinae; Gallus.

1 (bases 1 to 1522)

Boardman, P.E., Bonfield, J.K., Brown, W.R.A., Carder, C., Chalk, S.E., Croning, M.D.R., Davies, R.M., Francis, M.D., Grafham, D.V., Humbhard, S.J., Humphray, S.J., Hunt, P.J., Maddison, M., McLaren, S.R., Niblett, D., Overton, I.M., Rogers, J., Scott, C.E., Taylor, R.G., Tickle, C. and Wilson, S.A.

Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BBSRC/Dundee/Nottingham/Sanger/Sheffield/UMIST cDNA collection, from a library constructed by Elizabeth Bosch. cDNA was prepared from RNA extracted from muscle, normalised, and poly A-trimmed. EcoRI-NotI cut cDNA was then ligated into the vector. Vector: pBluescript II KS(+); Site_1: EcoRI; Site_2: NotI Host: Escherichia coli DH10B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sequencing project
This sequence is fi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (02-FEB-2004) Sanger Institute, Hinxton, Cambridges CB10 1SA, UK. E-mail enquiries: chickest@bms.umist.ac.uk BBSRC/Dundee/Nottingham/Sanger/Sheffield/UMIST Gallus gallus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gallus gallus (chicken)
Gallus gallus
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LeuLeuIleSerGlyGlyHisCysLeuLeuAlaLeuValGlnGlyValSerAspPheLeu
                                   MetGluAlaHisAlaLeuThrIleArgLeuThrAsnLysValGluPheProPheLeuVal
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/clone_lib="CSEQRBN11"
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                /organism="Gallus gallus"
/mol_type="mRNA"
/strain="Layer and broiler"
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                                                                               ProLysCysProLeuGlyValAspIleSerLysGluValGlyGluAlaSerIleLysVal
                                                                                                                                        LeuLeuCysProProProArgLeuCysThrAspAsnGlyIleMetIleAlaTrpAsnGly
                                                                                                                                                                                                                                                                  AlaSerAsnPheTyrIleArgArgAlaLeuGluIleLeuThrAsnAlaThrGlnCysThr
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CTTTTACTCTCCGGAGGTCACTGCATCTTGGCAGTAGCACGAGGAGTTTCAGATTTCCTT
CCAAGACTAAGG
                          ProGlnLeuLys
                                                            CCAAAAGCTCCCCTTGGAATTGATATTTCCAAAAGAGTTGAAGAGGATTCCATCAAAGTG
                                                                                                                        ATTGAAAGGTTGCGTGCAGGATGTGGTATTTTATACAGTACTGATGGCATCCGCTACGAA
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Search completed: 1 Job time: 5276.16 November 10, 2005, 22:36:49

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-FGAPOP=6 -FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
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Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
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/cgn2_6/ptodata/1/pubpna/US11_NEW_PUB.seq:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.

Score

Match Length DB

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## ALIGNMENTS

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RESULT 1

US-10-120-988-177

; Sequence 177, Application US/10120988

publication No. US20030219745A1

; GENERAL INFORMATION:

; APPLICANT: Tang, Y. Tom

; APPLICANT: Goodrich, Ryle

; APPLICANT: Liu, Chenghua

; APPLICANT: Liu, Chenghua

; APPLICANT: Wang, Dunrui

; APPLICANT: Wang, Dunrui

; APPLICANT: Drmanac, Radoje T.

; TITLE OF INVENTION: No. US20030219745A1el Nucleic Acids and

; TITLE OF INVENTION: Polypeptides

; FILE REFERENCE: 802CON
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ORGANISM: Homo sapiens FEATURE:
NAME/KEY: CDS
LOCATION: (205)..(1305)
US-10-120-988-177
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SOFTWARE: pt FI genes Version 2.0
SEQ ID NO 177
LENGTH: 1416
TYPE: DNA
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CURRENT FILING DATE: 2002-04-11
PRIOR APPLICATION NUMBER: 09/774,528
PRIOR FILING DATE: 2001-01-30
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                                                                                                          GCAAGTAACTTCTATATCCGCAGAGCTCTGGAAATTTTAACAAACGCAACACAGTGCACT
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Gequence 23, Application US/10067443

Publication No. US20030082782A1

GENERAL INFORMATION:

APPLICANT: Bristol-Myers Squibb Company
ITILE OF INFURITION: POLYNUCLEOTIDE ENCODING A N

TITLE OF INFURITION: SPINAL CORD, MP-1

PILE REPERENCE: D0073 NP

CURRENT APPLICATION NUMBER: US/10/067,443

CURRENT APPLICATION NUMBER: US 60/266,518

PRIOR APPLICATION NUMBER: US 60/266,518

PRIOR APPLICATION NUMBER: US 60/282,814

PRIOR PILING DATE: 2001-02-05

PRIOR APPLICATION NUMBER: US 60/282,814

PRIOR PILING DATE: 2001-04-10

NUMBER OF SEQ ID NOS: 71

SOFTWARE: Patentin version 3.0

SEQ ID NO 23

LENGTH: 1526

TYPE: DNA

ORGANISM: homo sapiens
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ACAGTACAGCACAATGGCATGTCATCTTGTGAAAAGAACACATCGGGCTATTCTGTTT
                ThrValGlnHisThrMetAlaCysHisLeuValLysArgThrHisArgAlaIleLeuPhe 160
                                                                      GluLysGluGluGlyIleGluLysGlyGlnIleLeuSerSerAlaAlaAspIleAlaAla
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TYPE: DNA
ORGANISM: homo sapiens
US-10-649-273-23
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                                                                                                                                                                                                                                                       Percent Similarity:
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                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: PatentIn version 3.2 SEQ ID NO 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE,
FILE REFERENCE: D0073 CNT
CURRENT APPLICATION NUMBER: US/10/649,273
CURRENT FILING DATE: 2003-08-27
                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR ETLING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 10/067,443
PRIOR FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
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Sequence 23, Application US/10651722

Publication No. US20040048302A1

GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
ITILE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE, MP-1
FILE REFERENCE: D0073 DIV
CURRENT APPLICATION NUMBER: US/10/651,722
CURRENT FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 10/067,443
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER: OF SEQ ID NOS: 71
   Query Match:
DB:
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Best Local Similarity:
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US-10-651-722-23
                                                                                  Pred. No.:
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                                                                                                                                                                        ; SOFTWARE: Pates
; SEQ ID NO 23
; LENGTH: 1526
                                                                                                                                            TYPE: DNA
ORGANISM: homo
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Matches:
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RESULT 5
US-10-067-443-1
; Sequence 1, Application US/10067443
; Publication No. US20030082782A1
; GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
; TITLE OF INVENTION: SPINAL CORD, MP-1
FILE REFERENCE: D0073 NP
; CURRENT APPLICATION NUMBER: US/10/067,443
; CURRENT FILING DATE: 2002-02-05
; PRIOR APPLICATION NUMBER: US 60/266,518
; PRIOR FILING DATE: 2001-02-05
; PRIOR APPLICATION NUMBER: US 60/282,814
; PRIOR FILING DATE: 2001-04-10
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TYPE: DNA
ORGANISM: Homo &
FEATURE:
NAME/KEY: CDS
LOCATION: (231)
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SOFTWARE: PatentIn version 3.0
SEQ ID NO 1
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Sequence 1, Application US/10649273

Publication No. US20040043407A1

GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
ITILE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE, MP-1
FILE REFERENCE: D0073 CNT
CURRENT APPLICATION NUMBER: US/10/649,273

CURRENT FILING DATE: 2003-08-27
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 10/067,443
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 00/282,814
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR APPLICATION DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOFTWARE: PAtentin version 3.2
LENGTH: 2197
TVDE: DNA
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Query Match:
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; NAME/KEY: CDS
; LOCATION: (231)..(1472)
US-10-649-273-1
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ORGANISM: Homo sapiens
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                                                                               GluLysGluGlyIleGluLysGlyGlnIleLeuSerSerAlaAlaAspIleAlaAla 140
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ThrValGlmHisThrWetAlaCysHisLeuValLysArgTnrHisArgAlaIleLeuPhe 160
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US-10-651-722-1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE,
FILE REFERENCE: DO073 DIV
CURRENT APPLICATION NUMBER: US/10/651,722
CURRENT FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 10/067,443
PRIOR FILING DATE: 2002-02-05
PRIOR FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER: 2001-04-10
NUMBER: 2001-04-10
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LOCATION: (231)..(1472)
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CTTCTTGGAAAGTCTTTGGACATAGCACCAGGTGACATGCTTGACAAGGTGGCAAGAAGA 851
                                                                    CITTIGATITCIGGAGGICACIGICIGITIGGCAITAGITCAAGGAGITTCAGATITTCIG
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Publication No. US20050069877Al

Publication No. US20050069877Al

GENERAL INFORMATION:

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APPLICANT: SWARNKARA, Anita; HAFALIA, April J.A.;

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APPLICANT: YUE, Henry; FORSYTHE, Ian J.;

APPLICANT: GRIFFIN, Jennifer A.; LI, Joana X.;

APPLICANT: GRIFFIN, Jennifer A.; LI, Joana X.;

APPLICANT: GRIFFIN, Jennifer A.; LI, Joana X.;

APPLICANT: GRIFFIN, Jennifer J.; DING, Li;

APPLICANT: YANG, Junning; THANGAVELU, Kavitha; J.

APPLICANT: BAUGHN, Mariah R.; BOROWSKY, Mark L.;

APPLICANT: YAO, Monique G.; CHAWLA, Narinder K.;

APPLICANT: LEE, Solly; BECHA, Shanya D.;

APPLICANT: LEE, Solly; BECHA, Shanya D.;

APPLICANT: LEE, Soo Yeun; TRAN, Uyen K.;

APPLICANT: LU, Yan; ZEBARJADIAN, Yeganeh

TITLE OF INVENTION: PROTEIN MODIFICATION AND MAINTENANCE MOLECULES

FILE REFERENCE: PF-1040 USN

CURRENT FILING DATE: 2003-12-16

PRIOR APPLICATION NUMBER: US/10/480,988
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US-10-480-988-36
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PRIOR APPLICATION NUMBER: US 60/300,508
PRIOR APPLICATION NUMBER: US 60/303,445
PRIOR APPLICATION NUMBER: US 60/303,445
PRIOR PILING DATE: 2001-07-06
PRIOR PILING DATE: 2001-07-13
PRIOR PILING DATE: 2001-08-09
PRIOR APPLICATION NUMBER: US 60/311,442
PRIOR PILING DATE: 2001-08-09
PRIOR APPLICATION NUMBER: US 60/314,821
PRIOR PILING DATE: 2001-08-24
PRIOR PILING DATE: 2001-08-24
PRIOR APPLICATION NUMBER: US 60/315,992
PRIOR APPLICATION NUMBER: US 60/315,992
PRIOR APPLICATION NUMBER: US 60/378,205
PRIOR PILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: US 60/378,205
PRIOR PILING DATE: 2002-05-03
NUMBER OF SEQ ID NOS: 56
SOPTWARE: PERL Program
SEQ ID NO 36
LENGTH: 2572
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; OTHER INFORMATION: Incyte
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ORGANISM: Homo
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AlaSerAsnPheTyrIleArgArgAlaLeuGluIleLeuThrAsnAlaThrGlnCysThr
                                                                 CysLysGlnArgAspLeuLeuProGlnAsnAsnAlaValLeuValAlaSerGlyGlyVal
                                                                                                                                                                                                                GAAAAAGAGGAAGGTATTGAGAAGGGGCAAATCCTGTCTTCAGCAGCAGACATTGCTGCC
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                                                                                                                                                   ThrValGlnHisThrMetAlaCysHisLeuValLysArgThrHisArgAlaIleLeuPhe
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US-10-649-273-2_COPY_148_414 (1-267) x US-10-067-443-21 (1-1387)
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DB:
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Best Local Similarity:
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Publication No. US20030082782A1

GENERAL INFORMATION:
APPLICANT: Bristcol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLECTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED
TITLE OF INVENTION: SPINAL CORD, MP-1
FILE REFERENCE: D0073 NP
CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER: OF SEQ ID NOS: 71
COCUMENDE DEFORMED NOS: 71
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: PatentIn version 3.0
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TYPE: DNA
ORGANISM: homo sapiens
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AsnCysAspPheSerPheThrGlyLeuGlnHisValThrAspLysIleIleMetLysLys
                                LeuAlaLysGlnGlyAsnArgPheHisPheAspIleLysProProLeuHisHisAlaLys
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PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 10/067,443
PRIOR FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOPTWARE: PATENTIN VERSION 3.2
SEQ ID NO 21
LENGTH: 1387
TYPE: DNA
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               US-10-649-273-2_COPY_148_414 (1-267)
                                                                Query Match:
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US-10-649-273-21
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                                                                                                                                 Pred. No.:
                                                                                                                                                Alignment Scores:
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Publication No. US20040043407A1
GENERAL INFORMATION:
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TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING
FILE REFERENCE: D0073 CNT
CURRENT APPLICATION NUMBER: US/10/649,273
CURRENT FILING DATE: 2003-08-27
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                  x US-10-649-273-21 (1-1387)
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Matches:
Conservative:
Mismatches:
Indels:
Gaps:
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RESULT 11

US-10-651-722-21

Sequence 21, Application US/10651722

Publication No. US20040048302A1

GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A N
FILE REFERENCE: D0073 DIV
CURRENT APPLICATION NUMBER: US/10/651,722
CURRENT FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 10/067,443
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; PRIOR APPLICATION NUMBER: US 60/;
; PRIOR FILING DATE: 2001-04-10
; NUMBER OF SEQ ID NOS: 71
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 21
; LENGTH: 1387
; TYPE: DNA
; ORGANISM: homo sapiens
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                        IleAlaTrpAsnGlyIleGluArgLeuArgAlaGlyLeuGlyIleLeuHisAspIleGlu
                                                    AlaThrGlnCysThrLeuLeuCysProProProPargLeuCysThrAspAsnGlyIleMet
                                                                                                                                     CGGGCTATTCTGTTTTGTAAGCAGAGAGACTTGTTACCTCAAAATAATGCAGTACTGGTT
                                                                                                                                              ArgAlaIleLeuPheCysLysGlnArgAspLeuLeuProGlnAsnAsnAlaValLeuVal
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US-10-649-273-2_COPY_148_414 (1-267) x US-10-651-722-21 (1-1387)
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                TGCCTAAAAATAGCTGCTCATTTCTGCAGGTATGAGAAGGGGCAAATCCTGTCTTCAGCA
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                                                                    Length:
Matches:
Conservative:
Mismatches:
Indels:
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                               -GluLysGlyGlnIleLeuSerSerAla
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Sequence 1047, Application US/1088753A

Publication No. US20050085436A1

GENERAL INFORMATION:

APPLICANT: Garza, Dan
APPLICANT: Li, Hao
TITLE OF INVENTION: with insulin signalling dysregulation
FILE REFERENCE: 4-33262

CURRENT APPLICATION NUMBER: US/10/887,553A

CURRENT APPLICATION NUMBER: 60/485,883

PRIOR APPLICATION NUMBER: 60/485,883

PRIOR FILING DATE: 2003-08-07

NUMBER OF SEQ ID NOS: 1208

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 1047

LENGTH: 1387

TYDE: DNA
ORGANISM: human
US-10-887-553A-1047
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                               TGCCTAAAAATAGCTGCTCATTTCTGCAGGTATGAGAAGGGGCAAATCCTGTCTTCAGCA
                                                                                               GAAAAAGAGGAAGGTATATTTCTAATTAGTAAAGTTGAACAGATAAATATTCCTGGATTG
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APPLICANT: Leiby, Kevin R.

APPLICANT: Kapeller-Libermann, Rosana
APPLICANT: Glucksmann, Maria A.

TITLE OF INVENTION: 38650, 28472, 5495, 65507, 81588, AND
TITLE OF INVENTION: 14354 METHODS AND COMPOSITIONS OF HUMAN PROTEINS AND USES
TITLE OF INVENTION: 14354 METHODS AND COMPOSITIONS OF HUMAN PROTEINS AND USES
TITLE OF INVENTION: 14354 METHODS AND COMPOSITIONS OF HUMAN PROTEINS AND USES
TITLE OF INVENTION: 14354 METHODS AND COMPOSITIONS OF HUMAN PROTEINS AND USES
TITLE OF INVENTION NUMBER: US/10/012,140
CURRENT FILING DATE: 2001-11-08
PRIOR APPLICATION NUMBER: 60/246,768
PRIOR FILING DATE: 2000-11-08
PRIOR APPLICATION NUMBER: 60/246,772
PRIOR APPLICATION NUMBER: 60/246,772
PRIOR FILING DATE: 2000-11-08
PRIOR FILING DATE: 2000-11-15
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LENGTH: 1245
TYPE: DNA
ORGANISM: Homo 6
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Matches:
Conservative:
Mismatches:
Indels:
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Sequence 4, Application US/10012140

Publication No. US2003009017A1

GENERAL INFORMATION.

APPLICANT: Leiby, Kevin R.

APPLICANT: Kapeller-Libermann, Rosana
APPLICANT: Glucksmann, Maria A.

TITLE OF INVENTION: 14354 METHODS AND COMPO

TITLE OF INVENTION: THEREOF

FILE REFERENCE: 381552004990

CURRENT APPLICATION NUMBER: US/10/012,140

CURRENT FILING DATE: 2001-11-08

PRIOR APPLICATION NUMBER: 60/246,768

PRIOR APPLICATION NUMBER: 60/246,772

PRIOR APPLICATION NUMBER: 60/246,772

PRIOR APPLICATION NUMBER: 60/249,185

PRIOR PILING DATE: 2000-11-08

PRIOR PILING DATE: 2000-11-08

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; LOCATION: (1) ... (1820)
; OTHER INFORMATION: n =
US-10-012-140-4
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FEATURE:
NAME/KEY: CDS
LOCATION: (146)...(1390)
FEATURE:
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                                                       ProLysCysProLeuGlyValAspIleSerLysGluValGlyGluAlaSerIleLysVal 260
                                                                                                                     IleGluArgLeuArgAlaGlyLeuGlyIleLeuHisAspIleGluGlyIleArgTyrGlu 240
                                                                                                                                                                 GCAAGTAACTTCTATATCCGCAGAGCTCTGGAAATTTTAACAAACGCAACACAGTGCACT
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      ProGlnLeuLysMetGluIle
                                        CCAAAATGTCCTCTTGGAGTAGACATATCAAAAGAAGTTGGAGAAGCTTCCATAAAAGTA
                                                                                                      ATTGAAAGACTACGTGCTGGCTTGGGCATTTTACATGACATAGAAGGCATCCGCTATGAA
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RESULT 15 US-10-094-749-400 뮹

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Sequence 400, Application US/10094749

Publication No. US20030219741A1

GENERAL INFORMATION:
APPLICANT: ISGGAI, TAKAO
APPLICANT: SUGIYAMA, TOMOYASU
APPLICANT: SUGIYAMA, TOMOYASU
APPLICANT: SATO, HIROYUKI
APPLICANT: SATO, HIROYUKI
APPLICANT: ISONO, YUUKO
APPLICANT: ISONO, YUUKO
APPLICANT: ISONO, YUUKO
APPLICANT: NAGAI, KEIICHI
APPLICANT: NAGAI, KEIICHI
APPLICANT: NAGAI, KEIICHI
APPLICANT: TAMECHIKA, ICHIRO
APPLICANT: TAMECHIKA, ICHIRO
APPLICANT: YOSHIKAMA, TSUTOMU
APPLICANT: MASCHARI, KENJI
APPLICANT: MASCHO, YASUHIKO
APPLICANT: MASCHARI, KENJI
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APPLICANT: MASCHARI
APPLICANTON NUMBER: US/10/094,749
CURRENT APPLICATION NUMBER: US/10/094,749
CURRENT APPLICATION NUMBER: US/10/094,749
PRIOR APPLICATION NUMBER: US/10/094,749
PRIOR APPLICATION NUMBER: US/10/094,749
PRIOR APPLICATION NUMBER: US/10/094,749
PRIOR APPLICATION NUMBER: US/10/094,749
PRIOR APPLICATION NUMBER: US/10/094,749
PRIOR FILING DATE: 2001-09-14
NUMBER OF SEQ ID NOS: 3381
SOFTWARE: PATENTIN PATENTIN VOI. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; SEQ ID NO 400
; LENGTH: 2208
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-094-749-400
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Best Local Similarity:
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AsnCysAspPheSerPheThrGlyLeuGlnHisValThrAspLysIleIleMetLysLys 120
                                              LeuAlaLysGlnGlyAsnArgPheHisPheAspIleLysProProLeuHisHisAlaLys
                                                                                                                                                CTTCCTTTAATAAAACATCCAGAGTGCTCCACCATGAGTGGTGGGAAAGCCCATAGAACAT
                                                                                                                                                                           LeuSerLeuIleLysHisProGluCysSerThrMetSerGlyGlyLysAlaIleGluHis
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Matches:
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CCACAATTAAAAATGGAGATA
                ProGlnLeuLysMetGluIle
                                                   ---TGATGTCCTCTTGGAGTAGACATATCAAAAGAAGTTGGAGAAGCTTCCATAAAAGTA
                                                                                                                                                                                                                                                                                                                                                                                        GluLysGluGluGlyIleGluLysGlyGlnIleLeuSerSerAlaAlaAspIleAlaAla
                                                                                                                                                                                                             GCAAGTAACTTCTGTATCCGCAGAGCTCTGGAAATTTTAACAAACGCAACACAGTGCACT
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                                                               ProLysCysProLeuGlyValAspIleSerLysGluValGlyGluAlaSerIleLysVal
                                                                                                                              IleGluArgLeuArgAlaGlyLeuGlyIleLeuHisAspIleGluGlyIleArgTyrGlu
                                                                                                                                                                        LeuLeuCysProProProArgLeuCysThrAspAsnGlyIleMetIleAlaTrpAsnGly
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Search completed: November 11, 2005, 03:16:33 Job time: 896.614 secs

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Result
No.
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-Q=/cgn2 1/USPTO_spool_p/US10649273/runat_02112005_091339_15581/app_query.fasta_1.1429
-Q=/cgn2 1/USPTO_spool_p/US10649273/runat_02112005_091339_15581/app_query.fasta_1.1429
-DB=Issued_patents NA -QFMT=fastap -SUFFIX=p2n.rni -MINMATCH=0.1 -LOOPCL=0
-LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi
-LIST=45 -DOCALIGN=200 -THR SCORE=pct -THR MAX=100 -THR MIN=0 -ALIGN=15
-MODE=LOCAL -OUTFMT=pro -NOREN=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000
-USER=US10649273 @CRIT - NOREN=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=2000000000
-USER=US10649273 @CRIT -1177 @runat 02112005_091339_15581 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DEV TIMEOUT=120 -WARN TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
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Maximum Match 100%
Listing first 45 summaries
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-MODEL=frame+_p2n.model .
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                  1385
1358.5
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                  100.0
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Match Length DB
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Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
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                                                                                                                                                                                                                                                                                                                                                                                                                                        /cgn2_6/ptodata/1/ina/5A_COMB.seq:*
/cgn2_6/ptodata/1/ina/5B_COMB.seq:*
/cgn2_6/ptodata/1/ina/6B_COMB.seq:*
/cgn2_6/ptodata/1/ina/6B_COMB.seq:*
/cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
/cgn2_6/ptodata/1/ina/backfiles1.seq:*
  1416
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              US-09-774-528-177
US-10-067-443-23
US-10-067-443-21
US-10-067-443-21
US-10-067-443-20
US-09-596-002-38
US-09-596-002-38
US-09-59-002-38-804
US-09-557-884-1
4 US-09-643-9908-1
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2305.321 Million cell updates/sec
            Sequence 177, App
Sequence 23, Appli
Sequence 1, Appli
Sequence 21, Appli
Sequence 20, Appl
Sequence 38, Appl
Sequence 806, App
Sequence 804, App
Sequence 801, Appli
Sequence 1, Appli
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Sequence 6612,
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169	181.5	185.5	192.5	207.5	207.5	211.5	215.5	215.5	216	216	218	218	218	220	233	236	236	236	236.5	241	246	248	250		250	254	254	261	268.5	270.5	280.5	282
12.2	13.1	13.4			15.0	15.3	15.6	15.6	15.6	'n	. 7	٠,	15.7	15.9	16.8	17.0	17.0	17.0	17.1	17.4	17.8	17.9		18	18.1	18.3	18.3	18.8	19.4	9	20.3	20.4
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US-09-724-623-19	US-09-328-352-261	US-08-311-731A-131	US-09-620-312D-6	US-09-692-570-1	US-08-916-421B-1	US-09-602-777A-147	US-09-103-840A-1	US-09-103-840A-2	US-08-781-986A-102	US-08-956-171E-102	US-09-438-185A-1	US-09-198-452A-1	US-09-221-017B-794	US-09-149-624-1	US-09-134-001C-1072	US-09-710-279-3985	US-09-134-000C-1551	US-09-710-279-727	US-09-790-988-1	US-09-107-433-1618	US-09-583-110-2196	US-09-066-512-1	US-08-961-527-214	US-09-536-784-51	US-08-961-083-51	US-08-987-121A-3	US-08-987-121A-5	US-09-107-532A-2955	US-09-489-039A-2050	US-08-087-797-1	US-09-543-681A-2341	US-09-902-540-503
19, /		13:	٠,	,,	Sequence 1, Appli	47,	Sequence 1, Appli	e 2,	102,	02	Sequence 1, Appli	e 1,	794	۲,	1072,	3985,	15	72		16	219	۲	N	51	51	س ۲		Sequence 2955, Ap		1, Apr	2341,	Sequence 503, App

## ALIGNMENTS

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; NAME/KEY: CDS
; LOCATION: (205)..(1305)
US-09-774-528-177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 1
US-09-774-528-177
                                                                                                     CURRENT APPLICATION NUMBER: US/09/774,528
CURRENT FILING DATE: 2001-01-30
NUMBER OF SEQ ID NOS: 441
SOFTWARE: pt_FL_genes Version 2.0
SEQ ID NO 177
SEQ ID NO 177
                                                                                                                                                                                                                                                                                              APPLICANT:
APPLICANT:
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                                                                                                                                                                                APPLICANT: Drmanac, Radoje T.
TITLE OF INVENTION: No. 6743619el Nucleic Acids and
TITLE OF INVENTION: Polypeptides
FILE REFERENCE: 802
                                                                                                                                                                                                                                                  APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                             TYPE: DNA
ORGANISM: Homo :
FEATURE:
                                                                                          ENGTH: 1416
                                                                                                                                                                                                                                               Zhang, Jie
Zhao, Qing A.
Yang, Yonghong
Xue, Aidong J.
Wehrman, Tom
Wang, Jian-Rui
Wang, Dunrui
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Asundi, Vinod
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Goodrich, Ryle
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Alignment Scores:

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Sequence 23, Application US/10067443
PAtent No. 6642041
GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING
TITLE OF INVENTION: SPINAL CORD, MP-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                No.:
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                                                                                                                         ProLysCysProLeuGlyValAspIleSerLysGluValGlyGluAlaSerIleLysVal
                                                                                                                                                             AlaSerAsnPheTyrIleArgArgAlaLeuGluIleLeuThrAsnAlaThrGlnCysThr
                                                                                                                                                                                                                                                                          CysLysGlnArgAspLeuLeuProGlnAsnAsnAlaValLeuValAlaSerGlyGlyVal
                                                                                                                                                                                                                                                                                                              AsnCysAspPheSerPheThrGlyLeuGlnHisValThrAspLysIleIleMetLysLys
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                                                                                      CCACAATTAAAAATGGAGATA 1302
                                                                                               ProGlnLeuLysMetGluIle
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CURRENT APPLICATION NUMBER: US/10/067,443;
CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518;
PRIOR PILING DATE: 2001-02-05;
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10;
NUMBER OF SEQ ID NOS: 71;
SOFTWARE: PATENTIN VERSION 3.0;
SEQ ID NO 23;
LENGTH: 1526
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                                                  ThrValGlnHisThrMetAlaCysHisLeuValLysArgThrHisArgAlaIleLeuPhe
              ATTGAAAGACTACGTGCTGGCTTGGGCATTTTACATGACATAGAAGGCATCCGCTATGAA
                       IleGluArgLeuArgAlaGlyLeuGlyIleLeuHisAspIleGluGlyIleArgTyrGlu
                                                                                                AlaSerAsnPheTyrIleArgArgAlaLeuGluIleLeuThrAsnAlaThrGlnCysThr
                                                                                                                           TGTAAGCAGAGAGTTGTTACCTCAAAATAATGCAGTACTGGTTGCATCTGGTGGTGTC
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PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOFTWARE: PATENTIN VERSION 3.0
SEQ ID NO 1
ENOTH: 2197
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APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLECTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED
TITLE OF INVENTION: SPINAL CORD, MP-1
FILE REFERENCE: D0073 NP
CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2002-02-05
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ORGANISM: Homo sapiens
FEATURE:
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LOCATION: (231)..(1472)
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APPLICANT: Bristol-Myers Squibb Company
APPLICANT: Bristol-Myers Squibb ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED
TITLE OF INVENTION: SPINAL CORD, MP-1
FILE REFERENCE: D0073 NP
CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR PILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
NUMBER OF SEQ ID NOS: 71
                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: PatentIn version 3.0
SEQ ID NO 21
LENGTH: 1387
TYPE: DNA
ORGANISM: homo sapiens
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Patent No. 6642041
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Alignment Scores: 1.34e-99 Length: 14364 Pred. No.: 1.34e-99 Length: 240 , Score: 824.50 Matches: 240	443-20	유:	2 iii 6	PatentIn	10	05	CURRENT FILING DATE: 200/20/05/,443  DATOR ADDITONTON NUMBER: 05/0/26 518	FILE REFERENCE DO073 NP	; APPULCANY: BIJSTOL-MYGIS SQUIDD COMPANY ; TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED I : TITLE OF INVENTION: SCHMAL CORD MB-1	GENERAL INFORMATION:	US-10-67-443-20 US-10-667-443-20 ; Sequence 20, Application US/10067443		256 AlaSerIleLysValProGlnLeuLysMetGluIle	Db 1245 GGCATCCGCTATGAACCAAAATGTCCTCTTGGAGTAGACATATCAAAAGAAGTTGGAGAA 1304	Qy 236 GlyIleArgTyrGluProLysCysProLeuGlyValAspIleSerLysGluValGlyGlu 255	1185 A	Qy 216 IlehlaTrpAsnGlyIleGluArgLeuArgAlaGlyLeuGlyIleLeuHisAspIleGlu 235	Db 1125 GCAACACAGTGCACTTTGTTGTGTCCTCCTCCCAGACTATGCACTGATAATGGCATTATG 1184	Qy 196 AlaThrGlnCysThrLeuLeuCysProProProArgLeuCysThrAspAsnGlyIleMet 215	1065 GCATCTGGTGGTGTCGCAAGTAACTTCTATATCCGCAGAGCTCTGGAAATTTTAACAAAC	Qy 176 AlaSerGlyGlyValAlaSerAsnPheTyrIleArgArgAlaLeuGluIleLeuThrAsn 195	Qy 156 ArgAlaIleLeuPheCysLysGlnArgAspLeuLeuProGlnAsnAsnAlaValLeuVal 175	Db 945 GCAGACATTGCTGCCACAGTACAGCACAATGGCATGTCATCTTGTGAAAAGAACACAT 1004	Qy 136 AlaAspIleAlaAlaThrValGlnHisThrMetAlaCysHisLeuValLysArgThrHis 155	Qy 127	Db 825 GAAAAAGAGGTATATTTCTAATTAGTAAAGTTGAACAGATAAATATTCCTGGATTG 884	Qy 121 GluLysGluGlyIle 126	Qy 101 AsnCysAspPheSerPheThrGlyLeuGlnHisValThrAspLysIleIleMetLysLys 120	Db 705 TTGGCCAAACAAGGAAATAGATTTCATTTTGACATCAAACCTCCCTTGCATCATGCTAAA 764	Db 645 CTTTCTTTAATAAACATCCAGAGTGCTCCACCATGAGTGGTGGGAAAGCCATAGAGCAT 704  Oy 81 LeuAlaLysGlnGlyAsnArgPheHisPheAsplleLysProProLeuHisHisAlaLys 100
Qy 58	Db 11744 TTTTGTTTTGTTAGTAATTTTCAATTTATTTCCTTTTGCATCTTTTCGTTTCACAGTATTT 11803	Qy 57 57	Db 11684 TGAATATCAGCTATAGTCTATATTTGCCAAAGTATAGCATGTTTTATTCATTC	Qy 57 57	Db 11624 GGGCAGTGATTGGCCTCTTATTGTTCGGGTCATCATAAGGAACAGGGTTGTCTGCTTACC 11683	Qy 57 57	Db 11564 AAGCAGTTATTGTCAACTTCAAGCCCATTTTCCAACCAATAGAAGAGCAAACATAGACAG 11623	Qy 57 57	Db 11504 CTTCCCACAGTGAAATAATAGGAAGTATAGGACAAGTTCTTATTATTGACGTTCATCATT 11563	Qy 57 57	AATACTACAGAGGCTACTGCCATATATAGGAAAACAAACA	57	57	Db 11324 GGTAAAATAAGAGAATATATATAGATTAACATAAGGACATTAAAGATGCAATGCACAGAA 11383	Qy 57 57	Db 11264 TATTTTGCCAAATAATGTATGTGAAAGAACGTGCTTCGTAAACTAACATACTGCAAAAAA 11323	Qy 57 57	Db 11204 AAATGGTAAGAGGTTCATATCTGTACATAAAGGCTGAAATAGTTTGCAGATACAGTTATG 11263	Qy 57 57	111	Qy 57 57	QY 57 57  Db 11084 TACCACCATTCACCTAAATATTTCTGAATTTTATCTTAGTAAACTGAAAAAATTCACAT 11143	Db 11024 TTAATTTCTCCATTCTTTTTTTTTATGTTGTCCATTTCAACTAAGTAGCAATAGATGTGC 11083	Qy 57 57	Qy 41 LeuLeuGlyLysSerLeuAspIleAlaProGlyAspMetLeuAspLysVal 57	Db 10905 CTTTTGATTTCTGGAGGTCACTGTCTGTTGGCATTAGTTCAAGGAGTTTCAGATTTTCTG 10964	Qy 21 LeuLeuIleSerGlyGlyHisCysLeuLeuAlaLeuValGlnGlyValSerAspPheLeu 40	Oy 1 MetGluAlaHisAlaLeuThrIleArgLeuThrAsnLysValGluPheProPheLeuVal 20	US-10-649-273-2_COPY_148_414 (1-267) x US-10-067-443-20 (1-14364)	Percent Similarity: 26.73% Conservative: 0 Best Local Similarity: 26.73% Mismatches: 2 Query Match: 59.53% Indels: 657 DB: 4 Gaps: 4

Query	12943	12884 GTTATGTAAAATGCACAAAATAATAAAATTTCAGGGTCTAAAATAGTGTACTATGA	ממ
Percer Best I	174	174	Ş
Pred.	12883	12824 TAAATGGTAGTAATTCATAGATGGAATTTTACATGGATATCAAAGAATAATTTTTTCAGA	В
N 1 : 00	174	174	δ
is Pui	12823	12764 GTTTAACTGTATCTTAAACTTTATTCATTTAAAAATTATAAACTAAAGTGGGAAAATGTT	Db
	174	174	9
	12763	12704 CACTATATTGTACCAGCCAAAATCCCTTTAATTGTGCTTAAAAGCCTTGACAAACATCCT	DЪ
	174	174	Ş
SEO	12703	12644 AGCAGTGGGAGGTGGTATTCCAACTTTCGTGACACTAATGTTGATAAAGTTCTGATAATC	Db
. ; PR	174	174	9
	12643	12584 CCTTCATCCTTTGATGAAATCCCTTTGTTTGTTTTGTTT	Ф
	174	174	Q
AP	12583	12524 ACAATAAAGAAAGTAAATGCAGTAACTGCTATCACTATTTTTAGAAAAATAGGTGGATTT	οь
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Pat	12523	12464 TAGCTTCTATGGCACATAAGTCTAATTTTGCATCTTCTTGTTGGATTTAAAAGAGGGCTT	망
US-09	174	174	Ş
250	12463	12404 GATAGGAAAGACTAACAGCCATTTCTTGTACTAGTTTGGTAGCTTTATGGGACAGCTGTA	ф
} §	174	174	Qy
? 8	12403	12344 TGTTTAGGATGAACAGATCTTTATGCCTTATGCTAGCCCTGACAGTATGAAATTATGCAG	Ф
} 5	174	174	γQ
? 5	12343	${\bf 12284}^{\top}{\bf ATTTTATAGTAATAGTTACACTTTGCAATATGTTACTTTTTTCCCAAGACCTTGACCTTG}$	Ф
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₹ B :	174 12283	159 uPheCysLysGlnArgAspLeuLeuProGlnAsnAsnAlaValLeu	Db Qy
δ ¦	12223	12164 TGCCACAGTACAGCACACAATGGCATGTCATCTTGTGAAAAGAACACATCGGGCTATTCT	DЪ
물 동	159	139 aAlaThrValGlnHisThrMetAlaCysHisLeuValLysArgThrHisArgAlaIleLe	Ş
? 문	12163	12104 GCTGCTCATTTCTGCAGGTATTGAGAAGGGGCAAATCCTGTCTTCAGCAGCAGACATTGC	뮹
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Đ	12103	12044 GGTATATTTCTAATTAGTAAAGTTGAACAGATAAATATTCCTGGATTGTGCCTAAAAATA	Db
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Ş	124	105 SerDheThrGlvLeuGlnHisValThrAspLvsIleIleMetLvsLvsGluLv:	Ş
В	104	85 GlyasnargPheHisPheAspIleLysProProLeuHisHisAallysAsnCysAspPhe 	유 성
δ 8	11923	11864 AAACATCCAGAGTGCTCCACCATGAGTGGTGGGAAAGCCATAGAACATTTGGCCAAACA	DЬ
P 5	84	65 LysHisProGluCysSerThrMetSerGlyGlyLysAlaIleGluHisLeuAlaLysGln	Ş
?	11863	11804 AATTTTATGACTCTAAAAAATATGTTTCTTTGATAGGTGGCAAGAAGACTTTCTTT	Ф

ORGANISM	RESULT 6 US-09-596-002-38 ; Sequence 38, Application US/09596002 ; Patent No. 6632636 ; Patent No. 6632636 ; GENERAL INFORMATION:     Lagace, Robert, E.     APPLICANT: Lagace, Robert, E.     APPLICANT: Patterson, Chandra     APPLICANT: Berg, Kim, L.     TITLE OF INVENTION: NUCLEOTIDE SEQUENCES OF MORAXELLA CATARRHALIS     FILE REFERENCE: PM-0008-4 US ; CURRENT APPLICATION NUMBER: US/09/596,002 ; CURRENT PILING DATE: 2000-06-16 ; PRIOR APPLICATION NUMBER: 60//140,121 ; PRIOR FILING DATE: 1999-06-18     NUMBER OF SEQ ID NOS:     SEQ ID NO 38 ; LENGTH: 94750 ; TYPE: DNA     CATARTSM: M Catarrhalis
Qy 226 laGlyLeuGlyIleLeuHisAspIleGluGlyIleArgTyrGluPr 	
13424 TGGAGCTATTGATTTTATTTTAATGCTTCTTATTTAAG  226 laGlyLeuGlyIleLeuHisAspIleGluGlyIleArg	13424 TGGAGCTATTGATTTTATTTTAATGCTTCTTATTTAGG
13364 219 13424 226 13484	13364 219 13424
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207 13304 218 13364 219 13424 226 238	207 13304 218 13364 219 13424
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Sequence 806, Application US/09540236
Patent No. 6673910
GENERAL INFORMATION:
APPLICANT: Gary L. Breton et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELITIVE OF INVENTION: FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 2709.2005-001
CURRENT APPLICATION NUMBER: US/09/540,236
CURRENT FILING DATE: 2000-04-04
NUMBER OF SEQ ID NOS: 3840
SEQ ID NO 806
LENGTH: 1053
TYPE: DNA
ORGANISM: M.catarrhalis
US-09-540-236-806
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GCGTCTCTGCCAATCAGATGCTACGCCGCACCCTGACCGAGACGCTCCGCCAAATCGAT 2475
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                   GENERAL INFORMATION:
APPLICANT: Marc J. Rubenfield et al.
APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
                                                                                                        Sequence 884, Application US/09252991A Patent No. 6551795
       CURRENT APPLICATION NUMBER: US/09/252,991A
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Percent Similarity:
Best Local Similarity:
Query Match:
DB:
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Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-649-273-2_COPY_148_414 (1-267)
1012 CGATGGGATATGACGATGCTTGGTATCGAATATGAT 1047
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                                                                                                                                                   GCGTCGGTGTACTACGCCCCGACCGAGCTATGCACGGATAATGGTGCGATGATCGCTTAC
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LENGTH: 1059

TYPE: DNA

ORGANISM: Pseudomonas
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PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-02-18
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
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                                                                                                                                                                                                                       ValAlaSerAsnPheTyrIleArgArgAlaLeuGluIleLeuThrAsnAlaThrGlnCys 199
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CAGCCGCGCTGGCCGATG 40
                                                                                            GlyIleGluArgLeuArgAlaGlyLeuGlyIleLeuHisAspIleGluGlyIleArgTyr
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CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-02-18
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 801
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GENERAL INFORMATION:
APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
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ORGANISM: Pseudomonas
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GTCAGCGCCAACCAGGCGCTGCGCAGCGGCCTGGAAAAGATGCTCGGCGAAATGAAGGGG
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                                                                                                   US-10-649-273-2_COPY_148_414 (1-267) x US-09-557-884-1 (1-1830121)
                                                                                                                                                              Percent Similarity:
Best Local Similarity:
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                                                                                                                                                  Query Match:
                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                       US-09-557-884-1
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Patent No. 6506581
GENERAL INFORMATION:
APPLICANT: Fleischmann et al.
TITLE OF INVENTION: The Nucle
                                                                                                                                                                                                                                                                                                                          INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 1830121 base pairs
                                                                                                                                                                                                           .
No.:
                                             552881 ATGGAAGGGCATTTACTTGCGCCAATGCTTGATGACAATTTCACCGCACTTTCCTTTTGTT 552822
                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/476,102
FILING DATE: JUN-5-195
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: ASCII Text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/557,884
FILING DATE: 25-Apr-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: 3 1/2 inch diskette
COMPUTER: Dell Pentium
OPERATING SYSTEM: MS DOS v6.22
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CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                     SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGCTGCCAGCGCCTGCTCGCCCGGC------CAGCATGACGGCCCCGCCGATCAGCGTC 1167
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAGGTGTTCTACGCCCGCCCGCGCTTCTGCACCGACAATGGCGCGATGATCGCCTACGCC 1116
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NAME: Michelle S. Marks
REGISTRATION NUMBER: 41,971
REFERENCE/DOCKET NUMBER: PB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE: Human Genome Sciences, STREET: 9410 Key West Avenue
                                                                          MetGluAlaHisAlaLeuThrlleArgLeu---ThrAsnLysValGluPheProPheLeu 19.
                                                                                                                                                                                                                                                                                                STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: 301-309-8439
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                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE: 301-309-8504
                                                                                                                                                                                                                                                                      DESCRIPTION: SEQ ID
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48.70%
35.65%
20.90%
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                                                                                                                                                                                                                                                                      NO: 1:
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Matches:
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US-09-643-990A-1/c
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Sequence 1, Application US/09643990A Patent No. 6528289
GENERAL INFORMATION:
                       ZIP: 20850

COMPUTER READABLE FORM:

MEDIUM TYPE: 3 1/2 inch diskette

COMPUTER: Dell Pentium

OPERATING SYSTEM: MS DOS v6.22

SOFTWARE: ASCII Text

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/643,990A

FILING DATE: 23-Aug-2000

CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     552281 TACACAGGITTTTTACGITTAAAAACAAGGT 552252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    552341 GGTGGCGAAGTGTTTTATĆĆTCAAĆĆTCAATTTTĞTACAGATAATGGTGCGATGATTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     552455 ---ATTAAATGTAAG----CGTGCATTGAAAGAAACAGGCTATAAACGTTTAGTGATTGCG
                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
ADDRESSEE: Human Genome Sciences,
STREET: 9410 Key West Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Robert D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            80 HisLeuAlaLysGlnGlyAsnArgPheHisPheAspIleLysProProLeuHisHisAla 99
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GGAGGGGTGAGCGCAAATAAAAACTCCGAGAAACGCTTGCGCACTTAATGCAAAATTTA 552342
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                                                                                                                                                                                                                                                                                                                                                     STATE: MD
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APPLICATION
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the Haemophilus influenzae
Thereof, and Uses Thereof
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552341 GGTGGCGAAGTGTTTTATCCTCAACCTCAATTTTGTACAGATAATGGTGCGATGATTGCT 552282
                                                                                                                                                                                                                                                                                                                                        552542
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FILING DATE: 1995-06-07
APPLICATION NUMBER: 08/426,787
FILING DATE: 1995-04-21
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NUMBER: PB186P1C1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 301-610-5790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                         GlnCysThrLeuLeuCysProProProArgLeuCysThrAspAsnGlyIleMetIleAla 217
                                                                                                            GlyGlyValAlaSerAsnPheTyrIleArgArgAlaLeuGluIleLeuThrAsnAlaThr 197
                                                                                                                                                                    ---ATTAAATGTAAG---CGTGCATTGAAAGAAACAGGCTATAAACGTTTAGTGATTGCG
                                                                                                                                                                                                                                                                                                                                      GCAATTAAAACGAGGGGAACTGATAGAGCAA-----ACTAAAGCAGAT 552498
                                                                                                                                                                                                                                                                                                                                                                                                                        GCAGGCCTTGATTTTAGTTTTTCTGGTTTAAAAACATTTGCCGCAAATACAGTTAATCAA 552543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGTTTAGCGGAAAAAGGTACGCCAAATCGTTTCACATTTCCACGTCCAATGACAGATCGT 552603
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                                                                                                                                                                                                                                                                                                                                                                               LysGluLysGluGluGly-----IleGluLysGlyGlnIleLeuSerSerAlaAlaAsp 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                               LysAsnCysAspPheSerPheThrGlyLeuGlnHisValThrAspLysIleIleMetLys 119
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TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
                                                                                GGAGGGGTGAGCGCAAATAAAAAAACTCCGAGAAACGCTTGCGCACTTAATGCAAAATTTA
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LENGTH: 996
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APPLICANT: Hinkle, Gregory J.
APPLICANT: Hinkle, Gregory J.
APPLICANT: Slater, Steven C.
APPLICANT: Wiegand, Roger C.
TITLE OF INVENTION: Myxococcus xanthus Genome Sequences and Uses Thereof
FILE REFERNCE: 38-10(15849)B
CURRENT APPLICATION NUMBER: US/09/902,540
CURRENT FILING DATE: 2001-07-10
PRIOR APPLICATION NUMBER: 60/217,883
PRIOR APPLICATION DATE: 2000-07-10
NUMBER OF SEQ ID NOS: 16825
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751
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GCGCTGCCGGCGACAACTTCGACGTGTCCTTCTCCGGGTTGAAG------ACG 645
                                                                                                            AlaAspIleAlaAlaThrValGlnHisThrMetAlaCysHisLeuValLysArgThrHis
                                                                                                                                                                                        IleIleMetLysLysGluLysGluGluGlyIleGluLysGlyGlnIleLeuSerSerAla 135
                                    ArgAlaIleLeuPheCysLysGlnArgAspLeuLeuProGlnAsnAsnAlaValLeuVal 175
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APPLICANT: Goldman, Barry S.
APPLICANT: Hinkle, Gregory J.
APPLICANT: Hinkle, Gregory J.
APPLICANT: Slater, Steven C.
APPLICANT: Wiegand, Roger C.
TITLE OF INVENTION: Myxococcus xanthus Genome Sequences and Uses Thereof FILE REFERENCE: 38-10(15849)B
CURRENT APPLICATION NUMBER: US/09/902,540
CURRENT FILING DATE: 2001-07-10
PRIOR APPLICATION NUMBER: 60/217,883
PRIOR PILING DATE: 2000-07-10
NUMBER OF SEQ ID NOS: 16825
SEQ ID NO 503
LENGTH: 2582
TYPE: DNA
ORGANISM: Myxococcus xanthus
US-09-902-540-503
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                                         GCGGTGCTGCACCACGTGCAGAAGCACGGCGTGCCGCAGGGGCAGGCGCTG--
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RESULT 14

US-09-543-681A-2341

; Sequence 2341, Application US/09543681A
; Patent NO. 6605709
; GENERAL INFORMATION:
; APPLICANT: GARY BRETON
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUIFITE OF INVENTION: DIAGNOSTICS AND THERAPEUTICS; FILE REFERENCE: 2709.1002-001
; CURRENT APPLICATION NUMBER: US/09/543,681A
; CURRENT FILING DATE: 2000-04-05
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PRIOR FILING DATE: 1999-04-09
NUMBER OF SEQ ID NOS: 8344
SEQ ID NO 2341
LENGTH: 1074
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664 CCCGGACTCGACTTTAGTTTCTCTGGTTTAAAAACCTTTTGCCGCTAATACTATTCGTCAA
                  100 LysAsnCysAspPheSerPheThrGlyLeuGlnHisValThrAspLysIleIleMetLys 119
                                                                                                                                                         565 CTATTGGGGCTT---GATTATCCC-----
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RESULT 15
US-08-087-797-
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                                                                                                                                                      TELEPAX: 704 334 2014
INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
TOPOLOGY: 1ii
HOLECULE TYPE:
HYPOTHETICAL: I
ANTI-SENSE: NO
                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 1315 base pairs
                                                                                                                                                                                                                                                                                                          SOPTWARE: PatentIn Release #1.0, Version CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/087,797
FILLING DATE: 14-JUL-1993
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
ADDRESSEE: Bell, Seltzer, Park & Gibson,
STREET: 1211 East Morehead Street,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Mellors, Alan
APPLICANT: Lo, Reggie Y.C.
APPLICANT: Abdullah, Khalid M.
TITLE OF INVENTION: Pasteurella Haemolytica
TITLE OF INVENTION: Glycoprotease
TITLE OF INVENTION: Gene and the Purified Enzyme
                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
NAME: Layton, Jr., Samuel G.
REGISTRATION NUMBER: 22807
REFERENCE/DOCKET NUMBER: 3374-80
TELECOMMUNICATION INFORMATION:
TELEPHONE: 704 377 1561
                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES:
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STREET: 1211 East Morehead Str
CITY: Charlotte
STATE: No. 5543312th Carolina
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OPERATING SYSTEM: PC-DOS/MS-DOS
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Job time :

Search completed: November 11, 2005, 03:03:04

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Best Local Similarity:
Query Match:
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US-08-087-797-1
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                                   220 GlyIleGluArgLeuArg 225
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                                                                                                                                                                                                                               903 AAATGCAAG---CGAGCGTTAGAGCAAACCGGCTATAAACGCTTAGTAATGGCAGGCGGC
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Matches:
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Result
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Maximum
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-Q=/cgn2 1/USPTO_spool_p/US10649273/runat_02112005_091338_15562/app_query.fasta_1.1429
-Q=/cgn2 1/USPTO_spool_p/US10649273/runat_02112005_091338_15562/app_query.fasta_1.1429
-DB=EST -QFMT=fastap -SUFFIX=p2n.rst -MINMATCH=0.1 -LOOPCI=0 -LOOPEXT=0
-UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.dd1 -LIST=45
-DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15 -MODE=LOCAL
-OUTFMT=pto -NORM-ext -HEAPSIZE=550 -MINLEN=0 -MAXLEN=2000000000
-USER=US10649273_GCGN_1 1_8076_grunat_02112005_091338_15562 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
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Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
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   79.2
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Listing first 45 summaries
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1 (bases 1 to 870)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: ATCC/DCTD/DTP
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AGENCOURT 7790948 NIH MGC 72 Homo
5', mRNA Bequence.
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                                                                         found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Plate: LLAM13342 row: 1 column: 21 High quality sequence stop: 710.
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/note="Organ: skin; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: SalI; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 2 kb. Library constructed by Life Technologies."
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Adachi,J., Aizawa,K., Akimura,T., Arakawa,T., Bono,H., Carninci,P.,

IS Adachi,J., Aizawa,K., Akimura,T., Hara,A., Hashizume,W.,

Fukuda,S., Furuno,M., Hiramotto,K., Hiraoka,T., Hirozane,T.,

Hayashida,K., Hayatsu,N., Hiramotto,K., Hiraoka,T., Kasukawa,T.,

Katoh,H., Kawai,J., Kojima,Y., Kondo,S., Konno,H., Kouda,M.,

Koya,S., Kuriharra,C., Matsuyama,T., Miyazaki,A., Murata,M.,

Nakamura,M., Nishi,K., Nomura,K., Numazaki,R., Ohno,M., Ohsato,N.,

Okazaki,Y., Saito,R., Saitoh,H., Sakai,C., Sakai,K., Sakazume,N.,

Sano,H., Sasaki,D., Shibata,K., Shiraki,T.,

Sogabe,Y., Tagami,M., Tagawa,A., Takahashi,F., Takaku-Akahira,S.,

Takeda,Y., Tanaka,T., Tomaru,A., Toya,T., Yasunishi,A.,

Muramatsu,M., and Hayashizaki,Y.
Submitted (16-JUL-2001) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC RIKEN Yokohama Institute; 1-7-25 Suehiro-cho, Tsurumi-ku, Yoko Kanagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.jp, URL:http://genome.gsc.riken.jp/, Tel:81-45-503-9222, Fax:81-45-503-9216) CDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Konno, H., Akiyama, J., Nishi, K., Kiteunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Yoneda, Y., Muramatsu, M., Inoue, Y., Kira, A., and Hayashizaki, Y. RIKEN integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer Genome Res. 10 (11), 1757-1771 (2000)
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Analysis of the mouse transcriptome of 60,770 full-length CDNAs
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URL:http://genome.gsc.riken.jp/

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Location/Qualifiers
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RITBSDLSAIATTIKFGLALSHGYGLSFSLQLVNQFKKPFIPHHMEAHALTIRLTNK
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                                    Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Pujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. RIKEN integrated sequence analysis (RISA) system—194-format sequencing pipeline with 384 multicapillary sequencer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Musaki, Y., Kanaki, Y., Musaki, Y., M
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AK011265 mRNA linear HTC 03-APR-2004 mus musculus 10 days embryo whole body cDNA, RIKEN full-length enriched library, clone:2610001M19 product:similar to PUTATIVE SIALOGLYCOPROTEASE TYPE 2 [Homo Bapiens], full insert sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute of physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (B-mail:genome-res@gsc.riken.jp, URL:http://genome.gsc.riken.jp/, Tel:81-45-503-9222, Fax:81-45-503-9216)

Please visit our web site (http://genome.gsc.riken.jp/) for further
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Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs
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KALEIVANATQCTLLCPPPRLCTDNGIMIAMNGIERLRAGLGVLHDVEDIRYEPKCPL
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/clone_lib="RIKEN full-length enriched
/dev stage="10 days embryo"
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/mol_type="mRNA"
/strain="C57BL/6J"
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                           CCGCGATTAAAAATGGCACTT 1448
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                                                               ProGlnLeuLysMetGluIle
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EST.
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12107411
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Touchman,J.W., Bouffard,G., Smith,D. and Peterson,K.
Expressed sequence tag analysis of human retina for the NEIBank
Project: Retbindin, an abundant, novel retinal cDNA and alternative
splicing of other retina-preferred gene transcripts
Mol. Vis. 8 (4), 196-204 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: graeme@helix.nih.gov
Plate: 03 row: d column: 11
Seq primer: M13RP1_reverse primer (ABI).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Wistow G
               GluHisLeuAlaLysGlnGlyAsnArgPheHisPheAspIleLysProProLeuHisHis
                                                            ArgArgLeuSerLeuIleLysHisProGluCysSerThrMetSerGlyGlyLysAlaIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mmalia; Eutheria; (bases 1 to 640)
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301 496 0078
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                                                                                                                                                                                                                                                                                                                                                                    /tissue_type="Retina"
//dev_stage="Adult"
//lab_host="EMDH10B"
//lab_host="EMDH10B"
//clone lib="Human Retina cDNA (Un-normalized,
unamplified): hd/he"
//note="Organ: Eye; Vector: pSPORT1; Neural retina tissue
was dissected from two 80 year old donors with no observed
eye disease. 100ug of total RNA was used for library
construction. A directionally cloned cDNA library in the
pSPORT1 vector (Life Technologies) was constructed at
Bioserve Biotechnology (Laurel MD) essentially following
the protocols of the SuperScript Plasmid System full
details of which are contained in the manufacturer's
Instruction manual (http://www.lifetech.com/). First
strand synthesis was carried out using a Not I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="hd03d11"
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                                                                                                                                                                                                                                                                                                                                           [5'-pGACTAGTTCTAGATCGCGAGCGGCCGCCC(T) 15-3'].
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                                                                                                                                                             2.94e-117
1097.00
100.00%
100.00%
100.00%
79.21%
                                                                                                                                                                                                                                                                                                          performed on the unamplified library at the NIH ramural Sequencing Center (NISC).
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                                                                                                                           x BQ636028 (1-640)
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Indels:
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Matches:
Conservative:
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ORGANISM
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AUTHORS
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BX391919/c
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cDNA clone
BX391919
             /mol_type="mRNA"
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                                             /organism="Homo sapiens"
                                                                             Location/Qualifiers
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139 AlaAlaThrValGlnHisThrMetAlaCysHisLeuValLysArgThrHisArgAlaIle
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                                                                                              On May 13, 2003 this sequence version replaced gi:30611736.

Contact: Genoscope
Genoscope - Centre National de Sequencage
Genoscope - Centre National de Sequencage
2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex - FRANCE
Email: seqref@genoscope.cns.fr, Web: www.genoscope.cns.fr
1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime
end enriched, double-strand cDNA was digsetted with Not I and cloned
into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library
was normalized. Library was constructed by Life Technologies, a
division of Invitrogen. This sequence belongs to sequence cluster
                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 852)

Li, W.B., Gruber, C., Jessee, J. and Polayes, D.

Full-length cDNA libraries and normalization

Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BX391919 852 bp mRNA linear BX391919 Homo sapiens HELA CELLS COT 25-NORMALIZED CDNA clone CSODKOO1YEO2 3-PRIME, mRNA sequence.
For more information about this cluster, see http://www.genoscope.cns.fr/cdna?s=CSOBAIO35ZEO7_CSO3317_1&c=1240.r
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AsnGlyIleGluArgLeuArgAlaGlyLeuGlyIleLeuHisAspIleGluGlyIleArg
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Percent Similarity:
Best Local Similarity:
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                                                                                     Mus musculus O-sialoglycoprotein clone IMAGE:1226118), containing
     Mus musculus
                                                      BC030671.1
                                                                                                                        BC030671
                     Mus musculus
                                                                                                                                                                                                       LeuLeuCysProProProArgLeu 208
                                                                                                                                                                                                                                                                               AlaSerAsnPheTyrIleArgArgAlaLeuGluIleLeuThrAsnAlaThrGlnCysThr
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LeuSerLeuIleLysHisProGluCysSerThrMetSerGlyGlyLysAlaIleGluHis
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/clone_lib="Homo sapiens HELA CELLS COT 25-NORMALIZED"
/note="Ist strand cDNA was primed with a NotI-oligo(dT)
primer. Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and EcoR V
sites of the pCMVSPORT 6 vector. Library was normalized."
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                     (house mouse)
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                                                                      Percent Similarity:
Best Local Similari
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MEDLINE
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TITLE
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No.:

RESULT 6 BC030671 LOCUS

DEFINITION

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ACCESSION VERSION

KEYWORDS ORGANISM

x BC030671 (1-1609)

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Local Similarity:
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Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,

Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,

Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,

Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,

Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,

Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,

Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,

Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,

McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,

Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,

Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,

Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,

Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,

Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,

Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,

Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E.,

Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A.

Generation and mouse cDNA semences
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Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Marcello Bento Soares, Ph.D.
CDNA Library Preparation: M. Bento Soares, University of Iowa CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Institute for Systems Biology
http://www.systemsbiology.org
Anup Madan, Jessica Pahey, Erin Helton, Mark Ketteman, Anuradha
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
1 (bases 1 to 1609)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (20-MAY-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 21312463 This clone has the following problem: frame shifted.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Clone distribution: MGC clone distribution through the I.M.A.G.E. Consortium/LLNL at: Series: IRAK Plate: 66 Row: e Column: 10
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1.21e-113
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79.03%
77.33%
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 701)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)
                                                                                                                                                         mRNA sequence.
BE740611
                                                                                              Homo sapiens
                                                                                                                                          BE740611.1 GI:10154603
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LeuSerLeuIleLysHisProGluCysSerThrMetSerGlyGlyLysAlaIleGluHis
                                                                                                                                                                                                                                                                   CCGCGATTAAAAATGGCACTT
                                                                                                                                                                                                                                                                                                                           ProLysCysProLeuGlyValAspIleSerLysGluValGlyGluAlaSerIleLysVal
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Email: cgapbs-r@mail.nih.gov

Tissue Procurement: DCTD/DTP

CDNA Library Preparation: Ling Hong/Rubin Laboratory

cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can

found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Plate: LLCM814 row: n column: 09
High quality sequence stop: 701.
Location/Qualifiers
                                             LeuAlaLysGlnGlyAsnArgPheHisPheAspIleLysProProLeuHisHisAlaLys
                                                                                                                                                                                                                                                                                                                                                                                                                                   LeuIeuIleSerGlyGlyHisCysLeuLeuAlaLeuValGlnGlyValSerAspPheLeu
heCysLysGlnArgAspLeuLeuProGlnAsnAsnAlaValLeuValAlaSerGlyGlyV
                                                                                                                                                                    LeuSerLeuIleLysHisProGluCysSerThrMetSerGlyGlyLysAlaIleGluHis
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insert_size_1.8kb. Library constructed by Ling Hong in
the laboratory of Gerald M. Rubin (University of
California, Berkeley) using_ZAP-cDNA_synthesis_kit
(Stratagene) and Superscript_II RT (Life_Technologies)."
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/db_xref="taxon:9606"
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5', mRNA Sequence.
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BQ961028.1 GI:22376506
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NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
Unpublished (1999)
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Tissue Procurement: DCTD/DTP/Gazdar
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Mammalia; Eutheria;
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                                                                                                                                                                                                                                  /tissue_type="large_cell carcinoma"
/lab_host="DH108 [phage-resistant)"
/clone_lib="NIH_MGC_18"
/clone_lib="NIH_MGC_18"
/note="Organ: lung; Vector: pOTB7; Site_1: XhoI; Site_2:
/coRI; cDNA made by oligo-dT priming. DTrectionally cloned into EcoRI/XhoI sites using the following 5; adaptor:
GCACGAG(G). Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-CDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies). Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sapiens (human)
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/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                               /db_xref="taxon:9606"
/clone="IMAGE:6423902"
                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
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944.00
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87.34%
68.16%
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Matches:
Conservative:
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Sus scrofa (pig)
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Sus scrofa
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Sus scrofa
Sus scrofa
Sus scrofa
Sus scrofa
Sus scrofa
Mammalla; Butherla; Cetartiodactyla; Suina; Suidae; Sus.

[ (bases 1 to 658)
Smith, T.P.L., Freking, B.A., Ford, J.J., Vallet, J.L., Fox, J.,
Wise, T.A., Nonneman, D.J., Wray, J.S. and Keele, J.W.
A second set of porcine ESTs from a pooled-tissue normalized
                                                                                                                                                                                                                                                                           Unpublished (2003)
Contact: Smith TPL
USDA, ARS, US Meat Animal
PO Box 166, Clay Center, 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CF362328.1 GI:34161882
                                                                                       cross match v0.990329.
Plate: SRG8015 row: H column:
Seq primer: TAGAAGGCACAGICGAGG.
                                                                                                                                                            Email: smith@email.marc.usda.gov
Single pass sequencing: Bases called
trimmed with the aid of the trim_alt
                                                                                                                                                                                                                                   Tel: 402 762 4366
Fax: 402 762 4390
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/organism="Sus scrofa"
/mol_type="mRNA"
                                                                  Location/Qualifiers
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NE 68933-0166, USA
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Gallus gallus (chicken)
Callus gallus
Callus Gallus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae;
Phasianinae; Gallus.
                                                                              sequence.
CF257246
CF257246.1 GI:33490501
                                                                                                                     CF257246
pha008_g02
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/tissue_type="pooled"
/lab_host="MH10B"
/clone_lib="MARC 3PIG"
/note="Vector: pcDNA3.1; Site_1: EcoRI; Site_2: NotI;
Library made with RNA pooled from multiple tTssues
including brain, liver, muscle, placenta/endometrium,
ovary, testes, and bone marrow."
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Wittzell,H., Bed'Hom,B., Morin,V.,
Chausse,A.M. and Zoorob,R.
A collection of chicken ESTs from a
Unpublished (2003)
Contact: Zoorob R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7 rue Guy Moquet, BP |
Tel: 33 1 49 58 35 00
Fax: 33 1 49 58 33 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CNRS
                   MetGluAlaHisAlaLeuThrIleArgLeuThrAsnLysValGluPheProPheLeuVal
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LeuLeuCysProProArgLeuCysThrAspAsnGlyIleMetIleAlaTrpAsnGly
                                                                               CystysGlnArgAspLeuLeuProGlnAsnAsnAlaValLeuValAlaSerGlyGlyVal
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                                                             TGCATGAAAAACAGCATATTATTACCAAAAACTGCAACTCTGGTTGTATCAGGAGGAGTT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 zoorob@vjf.cnrs.fr.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Gallus gallus"
/mol type="mRNA"
/db xref="taxon:9031"
/cell type="Splenocytes"
/clone lib="PHA-activated s
/note="Vector: pTriplEX2"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: tads@arri.barc.usda.gov
Email: tads@arri.barc.usda.gov
Single pass sequencing. Bases called and trimmed with phred
0.000925 using options -trim alt " -trim fasta. Vector identified
by cross match using options -minmatch 12 -minscore 18
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Sonstegard, T.S., Van Tassell, C.P., Matukumalli, G.P., Bosak, S., Rubenfield, M. and Gasbarre, L.C. G.P., Bosak, S., Rubenfield, M. and Gasbarre, L.C. Production of EST from cDNA libraries derived from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CK941819
4065407 BARC
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Bovine Functional Genomics Laboratory
Animal and Natural Resources Institute
Bdlg. 200 Rm2A BARC-East, Beltsville, N
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Plate: 12 row: F column: 24
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                                                                                                                                 /tissue_type="Pooled"
/dev_stage="Multiple"
/lab_host="DHNB TI phage resistant"
/clone_lib="BARC 10BOV"
/clone_lib="BARC 10BOV"
/clone_Torgan: Small Intestine; Vector: pAgen-1; Site_1:
ECORV; Site_2: NotI; Equimolar amounts of mRNA extracted from proximal jejunums of 18 and 21 wk old steprin, and distal ileums of 14 day old calves. proximal jejunum exposed to C. oncophora for 3 and 6 weeks, and distal ileum exposed to C. parvum for 7 days"
                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                            /db_xref="taxon:9913"
/clone="10BOV12_F24"
                                                                                                                                                                                                                                                                                                                                                             /mol_type="mRNA"
/strain="Holstein"
                                                                                                                                                                                                                                                                                                             sex="Male"
                                                                                                                                                                                                                                                                                                                                                                                               organism="Bos taurus"
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                                                                                                                                                                                      McCarrey, J., Eddy, M., Marra, M., Hillier, L., Clifton, S., Page, D., Martin, J., Wylie, T., Dante, M., Bowers, Y., Theising, B., Gibbons, M., Ritter, E., Tsagareishvili, R., Ronko, I., Maguire, L., Kennedy, S., Bennett, J., Waterston, R. and Wilson, R.
                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 597)
 Email: est@watson.wustl.edu
Library constructed and donated by J. McC.
Foundation for Biomedical Research, Dept.
                                                   Fax: 314 286 1810
                                                                     4444 Forest Park Parkway,
Tel: 314 286 1800
                                                                                                       Washington University School
                                                                                                                          NIEHS Mouse
                                                                                                                                                      Unpublished (2002)
                                                                                                                                                                            NIEHS Mouse
                                                                                                                                                                                                                                                                                                             Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                 CB272391.1
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                                                 TTGGCCAAAGACGGAAATAGATTCCATTTTACTATCAATCCACCTATGCAGAATGCTAAG
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/mol_type="mRNA"
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Length:
Matches;
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Gallus gallus (chicken)
Gallus gallus
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Boardman, P.E., Sanz-Ezquerro, J., Overton, I.M., Burt, D.W., Bosch, E., Fong, W.T., Tickle, C., Brown, W.R.A., Wilson, S.A. and Hubbard, S.J. A Comprehensive Collection of Chicken cDNAs

Curr. Biol. 12 (22), 1965-1969 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PO Box 88, Manchester, M60 10D, Tel: 01612008930 Fax: 01612360409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Simon Hubbard
Department of Biomolecular Sciences
University of Manchester Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae; Gallus.
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             /clone_lib="CSEQCHN59" /clone_lib="CSEQCHN59" /clone="Gorgan: limbs; Vector: pBluescript II KS(+); Site_1: /note="Gorgan: limbs; Vector: pBluescript II KS(+); Site_1: /note="Gorgan: limbs; Vector: pBluescript II KS(+); Site_1: /note="Gorgan: lib="Constructed from 1 million independent clones. cDNA synthesis was initiated using an oligo(dT) primer, using methylated C in the first strand synthesis reaction. Following this first strand reaction, double-stranded cDNA was blunted, ligated to NotI adapters, digested with EcoRI, size-selected, and cloned into the NotI and EcoRI compatible sites of a custom modified MCS of the pBluescript (KS+) vector. The library was normalized in 2 rounds using conditions adapted from Soares et al., PNAS (1994) 91: 9228-9232 and Bonaldo et al., Genome Research 6 (1996): 791, except that a significantly longer reannealing hybridization was used."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Simon.Hubbard@umist.ac.uk
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                   /dev_stage="36"
/lab_host="DH10B"
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clone="ChEST967014"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         strain="White Leghorn, Hisex"
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          1 (bases 1 to 730)
Gossner, A. and Hopkins, J.
Ovine spleen\brain cDNA ]
Unpublished (2004)
                                                                                           Ovis aries (sheep)
Ovis aries
                                                         Eukaryota; Metazoa;
Mammalia; Eutheria;
Caprinae; Ovis.
                                                                                                                                CN823245.1 GI:47951314
Contact: J Hopkins
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Animal Genetics Division
Shirakawa Institute of Animal Genetics
Odakura, Nishigo, Nishi-shirakawa, Fukushima
Tel: 81-248-25-5641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Single pass sequencing.
This clone was obtained from a polyA-deleted cDNA library.
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Takasuga,A., Hirotsune,S., Itoh,R., Jitohzono,A.,
and Sugimoto,Y.
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                                                            eTyrIleArgArgAlaLeuGluIleLeuThrAsnAlaThrGlnCysThrLeuLeuCysPr
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## ALIGNMENTS

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Parkinson's disease; Huntington's disease; Tourette syndrome; sepsis; liver disease; renal disease; immune disorder; rheumatoid arthritis; acquired immunodeficiency syndrome; AIDS; pulmonary disease; pneumonia; emphysema; cystic fibrosis; vascular disorder; inflammatory disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel human metalloprotease MP1 fragment #1.
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WO200272751-A2. Homo sapiens.

05-FEB-2001; 2001US-0266518P. 10-APR-2001; 2001US-0282814P. 05-FEB-2002; 2002WO-US003353

19-SEP-2002.

BRIM ) BRISTOL-MYERS SQUIBB CO

Chen J, Feder J, Nelson TC, Duclos F, Krystek

s

WPI; 2002-723329/78. N-PSDB; ABS76639.

New isolated nucleic acid encoding MP-1 protein, useful for preventing, treating, or ameliorating diseases associated with aberrant metalloproteinase activity, e.g. immune, metabolic, inflammatory and neurological disorders.

Claim 5; Page 29; 473pp; English.

The invention describes an isolated nucleic acid molecule (I) encoding metalloprotease (MP-1). (I) is useful for preventing, treating, or

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ABG96478
ID ABG9
XX ABG9
XX ABG9
XX ABG9
XX Nove
DE Nove
CX Meta
KW Meta
KW Tepr
KW Gush
KW 11ve
KW 10ve
KW acqu
KW acqu
KW neur
XX NO20
PN WO20
PN WO20
PN WO21
XX O5-F
PR 05-F
PR 05-F
PR 10-A
XX
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                                                                                                                                                                                                                                                                                                                                                                     Wetalloprotease; MP-1; immune disorder; glutamate transport; cancer; motor neuron disorder; amyotrophic lateral sclerosis; ALS; diabetes; reproductive disorder; Kleinfelter's syndrome; germinal cell aplasia; genital wart; metabolic disorder; premature puberty; Kallman syndrome; cushing's syndrome; neurodegenerative disease; Alzheimer's disease; Parkinson's disease; Huntington's disease; Tourette syndrome; sepsis; liver disease; renal disease; immune disorder; rheumatoid arthritis; acquired immunodeficiency syndrome; ALDS; pulmonary disease; pneumonia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABG96478 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 267 AA;
                                                                                                                                                                                                                                                                                                                               emphysema; cystic fibrosis; vascular disorder; inflammatory disorder; neurological disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel human
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                                                                      05-FEB-2001;
10-APR-2001;
                                                                                                                                         05-FEB-2002; 2002WO-US003353.
                                                                                                                                                                                       19-SEP-2002
                          (BRIM ) BRISTOL-MYERS
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                                                                   2001US-0266518P.
2001US-0282814P.
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                        SQUIBB CO
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Pred. No. 7.9e-131;
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                           amyotrophic lateral sclerosis (ALS), its juvenile form or an ALS-like condition. The compositions and methods are also useful for diagnosing, prognosticating, treating, ameliorating and/or treating disorders associated with MP-1 activity, e.g. diabetes, cancer, reproductive disorders (e.g. Kleinfelter's syndrome, genital warts, or germinal cell aplasia), metabolic disorders (e.g. premature puberty, Kallman syndrome, or Cushing's syndrome), neurodegenerative diseases (Alzheimer's disease, Parkinson's disease, Huntington's disease or Toursette syndrome), liver and renal diseases and immune disorders (e.g. AIDS, rheumatoid arthritis or sepsis), pulmonary diseases (e.g. pneumonia, emphysema or cystic fibrosis) and vascular, inflammatory and neurological disorders (e.g. Alzheimer's disease or Parkinson's disease). This is the amino acid sequence of a metalloprotease MP1 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New isolated nucleic acid encoding MP-1 protein, useful for preventing, treating, or ameliorating diseases associated with aberrant metalloproteinase activity, e.g. immune, metabolic, inflammatory and neurological disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention describes an isolated nucleic acid molecule (I) encoding metalloprotease (MP-1). (I) is useful for preventing, treating, or ameliorating a medical condition, particularly an immune disorder, an aberrant glutamate transport or motor neuron disorder, such as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chen
                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 414
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                                                                                                                                                                                                                                                                                                                            239;
                                                                                                                                                                                                 61 HFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQHTMAC
                                                                                                                                                                                                                                                                       1 LLALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKQGNRF
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                                                                                                     HLVKRTHRAILFCKQRDLLPQNNAVLVASGGVASNFYIRRALEILTNATQCTLLCPPPRL
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                           CTDNGIMIAWNGIERLRAGIGILHDIEGIRYEPKCPLGVDISKEVGEASIKVPQLKMEI
                                                                                                                                                                                                                                              LLALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKQGNRF
CTDNGIMIAWNGIERLRAGLGILHDIEGIRYEPKCPLGVDISKEVGEASIKVPQLKMEI 414
                                                                                                                                                                HFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQHTMAC
                                                                                                                                                                                                                                                                                                                              Conservative
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                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                 Score 1240; DB 5;
Pred. No. 1.5e-130;
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19-APR-2000; 2000CN-00106834
                       24-OCT-2001.
                                                                  Human; O-sialoglycoproteinase-like protein; OSGPLP; enzyme
                                                                                               19-APR-2002
                                                                                                                           ABB05481 standard;
                                                                               O-sialoglycoproteinase-like protein SEQ ID NO:2
                                                                                               (first entry)
                                                                                                                           protein; 414
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ABJ26654
ABJ26654
ID ABJ2
XX ABJ2
XX ABJ2
XX Huma
XX Cyto
Cere
KW cere
KW prot
KW prot
KW gast
KW gast
KW gene
XX gene
XX Homc
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XX Homc
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                                                                                                                           cerebroprotective; antiparkinsonian; nootropic; antiinflammatory; antiulcer; hepatotropic; gynaecological; antibacterial; virucide; protozoacide; antiparasitic; cell proliferative disease; pMOD; protein modification and maintenance molecule; immunogenic fragment; cancer; autoimmune; inflammatory disease; neurological disorder; gastrointestinal; developmental; vesicle trafficking disorder; infection; protein-protein interaction; drug-target interaction;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (OSGPLP). The present invention also describes: (1) the preparation of the OSGPLP protein; (2) applying the OSGPLP protein in diagnosis; (3) the prevention and/or treatment of related diseases; (4) utilising the OSGPLP protein in screening its agonist, excitomotor and inhibitor and preparing an antibody against the OSGPLP protein; and (5) the use of the OSGPLP polynucleotide sequences, proteins, agonists, excitomotors, inhibitors and antibodies in treating diseases related to the abnormal OSGPLP gene
                    03-JAN-2003
                                                  Cytostatic; antiarteriosclerotic; anti-HIV; antiallergic;
                                                                                                                                                                                                                                                                            Human protein modification + maintenance molecule protein SEQ ID
                                                                                                                                                                                                                                                                                                                01-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                             ABJ26654 standard;
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Pred. No. 1.5e-130;
, Mismatches 0;
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06-JUL-2001;
13-JUL-2001;
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Warren
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gandhi AR, Kable AE, Swarnakar A, Hafalia AJA, Tran B, Duggal Warren BA, Ison CH, Honchell CD, Nguyen DB, Lu DAM, Lee EA, Forsythe IJ, Barroso I, Ramkumar J, Griffin JA, Li JX, Yang Thangavelu K, Gletzen KJ, Ding L, Baughn MR, Borowsky ML, Yaw Walia NK, Mason PM, Gururajan R, Lee S, Becha SD, Lee SY, T. Elliott VS, Luo W, Sprague WW, Tang YT, Lu Y, Zebarjadian Y;
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                                                                                                                                                                                                                                                                                      Local Similarity
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DB; ABT23207.
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                                                                                                                                                                                                                                                                                                                                                                                                  invention
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HLVKRTHRAILFCKQRDLLPQNNAVLVASGGVASNFYIRRALEILTNATQCTLLCPPPRL
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                                                                                                                HFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKXEKEEGIEKGQILSSAADIAATVQHTMAC
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ilarity 100.0%;
Conservative (
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; 2001US-0311442P.
; 2001US-0314821P.
; 2001US-0315992P.
; 2002US-0378205P.
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2001US-0303445P.
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0; Mismatches
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AAE29234 standard; protein;

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Domain

Location/Qualifiers
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/label= Glycoprotease\_domain\_

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Best Local Sim
Matches 232;
                                                                                                                                                                                            Cancer; aberrant cell proliferation; aberrant cell differentiation; breast cancer; ovarian cancer; prostate cancer; colon cancer; lung cancer; immune disorder; heart disorder; cardiovascular disorder; endothelial disorder; hematopoletic disorder; blood vessel disorder; brain disorder; pain; metabolic disorder; liver disorder; diabetes; platelet disorder; carcinoma; sarcoma; leukaemia; Hodgkin's disease; autoimmune disorder; hypertension; atherosclerosis; heart failure; myocardial infarction; ischaemic heart disease; Crohn's disease; Grave's disease; Kawasaki syndrome; Raynaud's disease; aneurysm; cerebral ischaemia; peripheral neuropathy; Alzheimer's disease; enzyrearkinson's disease; anorexia nervosa; cachexia; glycoprotease; enzyrearkinson's disease; anorexia nervosa; cachexia; glycoprotease; enzyrearkinson's disease; enzyrearkinson's d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABG71161 standard;
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                                                                                                                                            Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                     Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08-NOV-2000; 2000US-0246768P.
08-NOV-2000; 2000US-0246772P.
15-NOV-2000; 2000US-0249185P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             glycoprotease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 4; Fig 8A-B; 178pp; English.
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                                                                                                                                                                                                                                                                                                                                                                     232;
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                   CTDNGIMIAWNGIERLRAGLGILHDIEGIRYEPKCPLGVDISKEVGEASIKVPQLKMBI
                                                                                   HLVKRTHRAILFCKQRDLLPQNNAVLVASGGVASNFYIRRALBILTNATQCTLLCPPPRL 180
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CTDNGIMIAWNGIERLRAGIGILHDIEGIRYBPKCPLGVDISKEVGEASIKVPQLKMEI
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Pred. No. 2.3e-126;
Pred. No. 4;
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ABU09569 ID ABUC

ABU09569 standard; protein; 414

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HPDIKPPLHHAKNCDPSFTGLQHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQHTMAC HFDIKPPLHHAKNCDFSFTGLQHVTDKNNENRKQEEGIBKGQILSSAADIAATVQHTMAC

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RECULT

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CC The invention relates to an isolated 38650 (encoding adenosine CC deaminase), 28472 (encoding a 915/coprotease), 5495 (encoding a 7 CC transmembrane receptor), 65507, 81588 or 14354 nucleic acid molecule (or CC a sequence which is at least 60% identical to the six nucleic acids or CC their open reading frames, fragments of at least 15 nucleotides, CC naturally occurring variants, or a DNA insert of the plasmid deposited CC with the American Type Culture Collection as Accession No. not defined in CC the specification, which encodes the amino acid sequence). Also included CC are a host cell containing the nucleic acids (used to produce the proteins), the encoded proteins, an antibody that selectively binds to CC activity of the polypeptide. The nucleic acid molecules, polypeptides and CC methods are useful for diagnosing, treating cancer, aberrant cellular CC proliferation and/or differentiation, immune disorders, heart disorders, cand metabolic disorders, blood vessel disorders, brain disorders, main CC and metabolic disorders, blood vessel disorders, brain disorders, pain CC and metabolic disorders, liver disorders and platelet disorders (many cxamples of these disorders are given in the specification). The present CC sequence is the Human glycoprotease encoded by cDNA 28472
                                                                                                                                Matches
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Best Local :
                                                                                                                                                                                                                                                                              Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     08-NOV-2000; 2000US-0246768P
08-NOV-2000; 2000US-0246772P
15-NOV-2000; 2000US-0249185P
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and liver disorders.
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KAPELLER-LIBERMANN
GLUCKSMANN M A.
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                                   LLALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKQGNRF
LLALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKQGNRF
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97.1%;
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                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 186; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                     The present invention relates to novel human secretory or membrane proteins (ADA54712-ADA55710) and their coding sequences (ADA5433-ADA54071). The coding sequences are useful in the gene therapy of diseases caused by abnormalities of the proteins, e.g. cancer, inflammatory diseases, osteoporosis or neurological disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Isogai T,
Yamamoto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cytostatic; Anti-inflammatory; Osteopathic; Neuroprotective; Nootropic; Gene Therapy; human; secretory protein; membrane proteins; cancer; inflammatory disease; osteoporosis; neurological disease.
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24-JAN-2002;
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                                                                                                                                                                                                                                                                                                                                                                          Sequence 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 14; SEQ ID NO 2039; 205pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             which the
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        polynucleotides encoding full-length polypeptides, e.g. secretory // or membrane proteins, useful for developing medicines for diseases ch the gene is involved, or as target molecules for gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2003-395539/38
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Yoshikawa T,
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2002US-0350435P.
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BIOTECHNOLOGY.
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                                                                                                                                                                                                                                                                         0;
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RESULT 9
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                                                                                                                                                                                                                                        The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention useful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABIG106-ABIG30511), expressed DNA sequences (ABIG106-ABIG30511), expressed DNA sequences (ABIG106-ABIG106-ABIG1076). The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABB69133;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABB69133 standard;
                                                                                                                                                                                                                 Sequence 409
                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; SEQ ID NO 34191; 21pp +
                                                                                                                                                                                                                                                                                                                                                                                                                                   New isolated nucleic acid genes from Drosophila and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23-MAR-2000; 2000US-0191637P
11-JUL-2000; 2000US-00614150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-MAR-2001; 2001WO-US009231
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Drosophila melanogaster polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Venter JC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         pharmaceutical.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Drosophila; developmental biology; cell signalling; insecticide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2001-656860/75.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       296
                          121 HLVKRTHRAILFC--KQRDLLPQNNAVLVASGGVASNFYIRRALEILTNATQCTLLCPPP 178
                                                                                                          167
                                                                              61 HFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQHTMAC 120
                                                                                                                                                               83;
                                                                                                                             2 LALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAK-QGNRF
                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABL13236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HLVKRTHRAILFCKQRDLLPQNNAVLVASGGVASNFCIRRALEILTNATQCTLLCPPPRL
HLMHRTQRAIEYCLLPHRQLFGDTPPTLVMSGGVANNDAIYANIEHLAAQYGCRSFRPSK
                                                     AYEFPLPLAQQRNCNFSFAGIKNNSFRAIRARERAERTPPDGVISNYGDFCAGLLRSVSR
                                                                                                          LVVANGPGRLTLLGQTLDDAPGEAFDKIGRRLRLHILPEYRLWNGGRAIEHAAQLASDPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTDNGIMIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTDNGIMIA 189
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                                                                                                                                                               Conservative
                                                                                                                                                                                                                   AA,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           entry)
                                                                                                                                                                         26.8%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      , GMd
                                                                                                                                                                                                                                                                                                                                                                                                                                    detection reagent for detecting 1000 or more for elucidating cell signaling and cell-cell
                                                                                                                                                               38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  409
                                                                                                                                                                            Score 332.5; DB 4
Pred. No. 3.9e-28;
                                                                                                                                                               Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                               Sequence Listing;
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                                                                                                                                                                                       DB 4;
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                                                                                                                                                               97;
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                                                                                                                                                               13;
                                                                                                                                                                                                                                                                                                                                                         invention
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                                                                                                                               Proteins AAY52202-Y52217 encompass a novel family of proteins designated the ygjD family, after the name given to the Escherichia coli family member. These proteins are essential for the survival of both Gram negative and Gram positive bacteria, although no function has as yet been ascribed to these proteins. The ygjD proteins, fragments of ygjD proteins (for example, fragments encompassing one or more conserved ygjD motifs such as AAY52218-Y52284) and nucleotides encoding them can be used to identify antagonists and broad spectrum antibacterial compounds. These antagonists and compounds can be used to treat a wide range of bacterial infections. New antibiotics are urgently needed, as serious bacterial infections and antibiotic resistant strains are becoming increasingly prevalent. The proteins of the invention are essential proteins for bacterial viability, and represent new targets for antibiotics
                                                                                                          Sequence 463
                                                                                                                                                                                                                                                                                                             Claim 1; Fig 1; 55pp; English.
                                                                                                                                                                                                                                                                                                                                                              WPI; 2000-013253/01.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Region
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       treatment; infection; resistance; drug target.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Arabidopsis thaliana ygjD protein homologue.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  09-FEB-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ygjD protein; essential; Gram positive; Gram negative; conserved; motif; identification; antagonist; antibacterial; antibiotic; broad spectrum;
                                                                                                                                                                                                                                                                                                                                                                                                               (GLAX ) GLAXO GROUP LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                347
           221
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                                                                                                                                                                                                                                                                                                                                      bacterial
                                                           82;
                                                                         Similarity
                        LLALVQCVODFILLGXGLDIAFGDWLDXWARRLGLIXWFECSTF6GGKAIEHLAKQGWRF 60
          LLVLAHKLGQYTQLGTTVDDAIGEAFDKTAKWLGLDMH----RSGGPAVEELALEGDAK 275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RYCSDNGVMIAWHGVEQL-----LQDKEASTRYDYD---SIDIQGSAGFA 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RLCTDNGIMIAWNGIERLRAGLGILHDIE-GIRYEPKCPLGVDISKEVGEA 228
                                                                                                                                                                                                                                                                                                                                                                                     Edgerton MD,
                                                           Conservative
                                                                                                           A
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                                                                                                                                                                                                                                                                                                                                    polypeptides used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "ygjD conserved
152. .198
/note= "ygjD conserved
208. .259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 111. .131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "ygjD conserved motif 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "ygjD conserved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                         26.3%; Score 326; DB 3; Length 463; 33.6%; Pred. No. 2.6e-27; Live 34; Mismatches 84; Indels
                                                                                                                                                                                                                                                                                                                                                                                      Loferer
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                                                                                                                                                                                                                                                                                                                                    identify broad spectrum antibiotics.
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19-MAY 1999;
20-MAY 1999;
21-MAY 1999;
24-MAY 1999;
25-MAY 1999;
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11-MAY-1999;
14-MAY-1999;
14-MAY-1999;
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04-MAY-1999;
05-MAY-1999;
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06-MAY-1999
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30-APR-1999
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23-APR-1999
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06-APR-1999;
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29-MAR-1999,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Arabidopsis thaliana.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       termination sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                hybridisation assay; genetic mapping; gene expression control;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Protein identification; signal transduction pathway; metabolic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Arabidopsis thaliana protein fragment SEQ ID NO: 21031.
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                                                                                                                                                                                                                                                                                                                                                                                                                                      2000EP-00301439
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                                            99US-0128714P

99US-012984SP

99US-0130077P

99US-0130810P

99US-0131449P

99US-013248P

99US-0132484P

99US-0132486P

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99US-01139119P 99US-0139452P 99US-0139452P 99US-0139454P 99US-0139454P 99US-0139454P 99US-0139454P 99US-0139454P 99US-0139454P 99US-0139454P 99US-0139454P 99US-0139452P 99US-0139462P 99US-0139463P 99US-0139463P 99US-0140053P 99US-0140053P 99US-0141287P 99US-0141287P 99US-0142154P 99US-0142154P 99US-0142154P 99US-0142154P 99US-0142154P 99US-01443152P 99US-01443152P 99US-01443152P 99US-01443152P 99US-01443152P 99US-01443152P 99US-01443152P 99US-01445145P 99US-01445145P 99US-01445145P 99US-01445145P 99US-0145145P 99US-0145145P 99US-014518P 99US-014528P 99US-014528P 99US-014518P 99US-014528P 99US-014528P 99US-0145918P 99US-014538P 99US-0146388P 99US-0146388P 99US-0146388P 99US-0147038P 99US-014704P	99US-0136782P. 99US-0137222P. 99US-0137528P. 99US-0137502P. 99US-0137504P. 99US-0138044P.
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31; Mismatches 82
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20-APR-1999

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25-MAY-1999

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81; Conservative 3
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; Pred. No. 1.5e-26;
31; Mismatches 82;
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06-SEP-2001; 2001US-00948993.
25-OCT-2001; 2001US-0342923P.
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06-MAR-2002; 2002US-0362699P.
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29-OCT-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Protein encoded by Prokaryotic essential gene #8461
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABU22934 standard; protein;
The invention relates to an isolated nucleic acid comprising any one
                                                  Claim 25;
                                                                                             New antisense nucleic acids, useful for identifying proteins or screening for homologous nucleic acids required for cellular proliferation to isolate candidate molecules for rational drug discovery programs.
                                                                                                                                                                                                  N-PSDB;
                                                                                                                                                                                                                         WPI; 2003-029926/02
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                                                                                                                                                                                                                                                                       Zamudio C,
Trawick JD,
                                                SEQ ID NO 50858; 1766pp; English.
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99US-0161992P.
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99US-0162142P.
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99US-0161405P.
99US-0161406P.
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Carr GJ,
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                                                                                                                                                                                                                                                                                                                                                   INC.
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                                                                                                                                                                                                                                                                       Ohlsen
Forsyth
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the 6213 antisense sequences given in the specification where expression of the nucleic acid inhibits proliferation of a cell. Also included are: (1) a vector comprising a promoter operably linked to the nucleic acid encoding a polypeptide whose expression is inhibited by the antisense conclusion acid; (2) a host cell containing the vector; (3) an isolated containing the vector; (3) an isolated containing the vector; (3) an isolated containing the vector; (3) an isolated containing the vector; (3) an isolated containing the vector; (3) an isolated containing the polypeptide; (6) inhibited by the activity of antibody capable of specifically binding compound that influences the activity of the polypeptide; (6) inhibiting cellular containing the polypeptide; (6) inhibiting cellular containing the polypeptide; (6) inhibiting cellular proliferation; (7) identifying a compound that influences the activity of the gene product or that has an activity against a biological pathway crequired for proliferation, or that inhibits cellular proliferation; (8) identifying a gene required for cellular proliferation or the biological pathway in which a proliferation-required gene or its gene product lies or a gene on which the test compound that inhibits proliferation of an organism acts; (9) manufacturing an antibiotic; (10) profiling a compound that inhibits proliferation of an organism acts; (9) manufacturing an antibiotic; (10) profiling a compound that inhibits are useful for compound that proliferation of an organism. The antitense nucleic acids are useful for identifying proteins or screening for homologous nucleic acids required for proliferation in cells orther than S. aureus, S. typhimurium, C. patent did not form part of the printed specification, but was obtained contained in electronic format directly from WIPO at the transpet of the printed specification, but was obtained contained in the proper of the printed specification, but was obtained contained the proper of the printed specification.
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Best Local
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                                                                                                                                                                                                                  Protein
                                                                                                                                                                                                                                                            19-JUN-2003
                                                                                                                                                                                                                                                                                                       ABU35232;
                                                                                                                                                                                                                                                                                                                                               ABU35232 standard; protein; 348
                                                                                                                               Moraxella catarrhalis.
                                                                                                                                                                     Antisense; prokaryotic essential
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     178 LMLVDGVGRYELIGETLDDAAGEAFDKSAKLMGL-GYP-----GGPALARLAEQGDASR 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             287 VLAAKAIRAL---KOTGL-----RRLVVAGGVGANALLRAHLARALKPLRAEAYFPPLSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   231 YDLPRPMLHSGDLDFSFSGLKTAVLTRV--KAATRDGGELGE--QDRADLAAATQAAIVE 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62 FDIKPPLHHAKNCDFSFTGLQ-HVTDKIIMKKEKEEGIEKGQILSSAADIAATVQHTMAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        74;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 LALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKQGNRFH
                                                                                                                                                                                                                  encoded by Prokaryotic essential gene #20759.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTDNGAMIAFAAAERVKAGLADLRE 363
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Pred. No. 1.2e-19;
3; Mismatches 78
                                                                                                                                                                                                                                                                                                                                                 A
                                                                                                                                                                     gene; cell proliferation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             78;
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21-MAR-2002; 2002WO-US009107

03-OCT-2002.

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                                                                                                                                                                                                                                                                                                                                                                                                                                                  CC the 6213 antisense sequences given in the specification where expression of the nucleic acid inhibits proliferation of a cell. Also included are: C (1) a vector comprising a promoter operably linked to the nucleic acid compound to the nucleic acid; (2) a host cell containing the vector; (3) an isolated concleic acid; (4) a host cell containing the vector; (3) an isolated containing the vector; (3) an isolated containing the vector; (3) an isolated containing the vector; (3) an isolated containing the vector; (3) an isolated containing the polypeptide; (6) inhibiting cellular polypeptide; (7) identifying a compound that influences the activity of agene in an operon required for contiferation; (7) identifying a compound that influences the activity of identifying a gene required for cellular proliferation or the biological pathway in which a proliferation, or that inhibits cellular proliferation of an compound's activity; (11) a culture comprising strains in which the gene product is overexpressed or underexpressed; (12) determining the extent compound's activity; (11) a culture comprising strains in which the gene product is overexpressed or underexpressed; (12) determining the extent convolute acide are useful for cellular proliferation of an culture comprising strains in which the gene product is overexpressed or underexpressed; (12) determining the extent convolute acide are useful for cellular proliferation of an culture compound that inhibits the gene conduct is overexpressed or underexpressed; (12) determining the extent convolute acide are useful for cellular proliferation of an culture compound that inhibits the gene conduct cacide are useful for convolute acide required for cellular proliferation to isolate candidate molecules for rational convolute for acide acide are useful for the target prokaryotic essential genes. Note: The sequence data for this contains contained for this present sequence is encoded by one of the carget prokaryotic essential genes. Note: The sequence data for this contains ano
                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 66
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06-SEP-2001;
25-OCT-2001;
08-FEB-2002;
06-MAR-2002;
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Wall D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New antisense nucleic acids, useful for identifying proteins or screening for homologous nucleic acids required for cellular proliferation to isolate candidate molecules for rational drug discovery programs.
                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 348 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the target prokaryotic essential genes. Note: The sequent and not form part of the printed specification, in electronic format directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 25; SEQ ID NO 63156; 1766pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2003-029926/02.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (ELIT-)
                                                                                                                                                                                                                                                                                                                                                     Local Similarity 33.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          invention relates to an isolated nucleic acid comprising any one of
181 CTDNGIMIAWNGIERLRAG 199
                                                                       254 TivickCTKALQMTGIRQ-----
                                                                                                                                                                                                                                                             147
                                                                                                                    121 HLVKRTHRAILFCKORDLLPONNAVLVASGGVASNFYIRRALEILTNATOCTLLCPPPRL 180
                                                                                                                                                                 200 AYELPRPMQH-KGLDFSFSGMKTAIHNLIKDTPNAQSDP----ATRADIAASFEYAVVD 253
                                                                                                                                                                                                              61 HFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQHTMAC 120
                                                                                                                                                                                                                                                                                                 1 LLALVOGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKOGNRF 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ELITRA PHARM INC.
                                                                                                                                                                                                                                                         MLVRADGVGVYQILGESIDDAVGECFDKTAKMLKL-PYP-----GGPNIEKLAKNGNPH
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Trawick JD,
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; 2001US-00948993.
; 2001US-0342923P.
; 2002US-00072851.
; 2002US-0362699P.
                                                                                                                                                                                                                                                                                                                                                 20.0%; Score 248.5; DB 6; Length 348; 33.2%; Pred. No. 9.4e-19; tive 33; Mismatches 79; Indels 21
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Carr GJ,
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                                                                    Ohlsen KL,
Forsyth RA,
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Xu HH;
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Db 306 CTDNGAMIAYAGFCRLSCG 3

Search completed: November 10, 2005, 16:48:03 Job time: 65.4261 secs

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OM protein - protein search, using sw model
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Maximum Match 100%
Listing first 45 summaries
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Perfect score:
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PIR_79:*
1: pir1:*
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1240
1 LLALVQGVSDFLLLGKSLDI........DISKEVGEASIKVPQLĶMBI 239
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Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                               283416 seqs, 96216763 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                           283416
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

29	28	27	51	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	ъ	4	ω	2	<b>~</b>	No.	Result
193.5	195	195	195.5	195.5	199	200	201	201.5	202	204.5	205.5	206	209	209	209	210	210.5	213	221.5	224	230.5	231	237.5	238	241.5	244	244	326	Score	
15.6	15.7	15.7	۲ <u>۲</u> دا	15.8	16.0	16.1	16.2	16.2	16.3	16.5	16.6	16.6	16.9	16.9	16.9	16.9	17.0	.17.2	17.9	18.1	18.6	18.6	19.2	19.2	19.5	19.7	19.7	26.3	Match	
327	412	353	9, 1,	340	354	325	354	421	324	534	348	337	337	337	324	337	335	337	323	342	344	341	367	387	359	366	σ	463	Length	
N	N	N	<b>K</b> )	N	N	N	N	N	N	N	N	_	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	8	
G72411	T40899	T04567	769786	B97011	C81986	A38108	C81040	T18825	C71215	H69056	D82807	QQECR6	B85967	C91122	F75029	AI0079	G70369	AG0892	G69388	H64074	E97707	H83572	F87257	E71711	AB3274	D97677	AB2902	E84888	ID	
hypothetical prote	probable proteinas	O-sialoglycoprotei	glycoprotein endop	probably 0-sialogl	probable O-sialogl	O-sialoglycoprotei	O-sialoglycoprotei	hypothetical prote	O-sialoglycoprotei	O-sialoglycoprotei	O-sialoglycoprotei	O-sialoglycoprotei	probable O-sialogl	probable O-sialogl	o-sialoglycoprotei	probable glycoprot	sialoglycoproteina	probable glycoprot	O-sialoglycoprotei	O-sialoglycoprotei	O-sialoglycoprotei	O-sialoglycoprotei		probable o-sialogl	O-sialoglycoprotei	probable o-sialogl	O-sialoglycoprotei	probable O-sialogl		

RESULT 2 AB2902

O-sialoglycoprotein endopeptidase gcp [imported] - Agrobacterium tumefaciens (strain C58 C;Species: Agrobacterium tumefaciens C;Date: 11-Jan-2002 #sequence\_revision 11-Jan-2002 #text\_change 18-Nov-2002

45	44	43	42	41	40	39	38	37	36	35	3.4 4	ω u	32	31	30
174.5	174.5	174.5	178	179	180	180.5	182	183	186	186.5	188.5	189	192	192	193
14.1	14.1	14.1	14.4	14.4	14.5	14.6	14.7	14.8	15.0	15.0	15.2	15.2	15.5	15.5	15.6
374	344	344	336	344	246	539	338	343	336	344	344	336	346	346	348
N	N	2	N	N	N	N	N	N	N	N	N	N	N	N	2
T35581	B86515	H72106	E84936	AB1705	G90187	A64441	A71545	D83718	B95015	H70737	AC1334	C97888	H70195	AF1820	875548
probable O-sialogl	O-sialoglycoprotei	o-sialoglycoprotei	O-sialoglycoprotei	glycoprotein endop	o-sialoglycoprotei	O-sialoglycoprotei	probable o-sialogl	glycoprotein endop	glycoproteinase fa	probable o-sialogl	glycoprotein endop	O-sialoglycoprotei	sialoglycoproteina	sialoglycoproteina	sialoglycoproteina

## ALIGNMENTS

Qy Db	Qy db	B &	B &	B 8	Query Match Best Local : Matches 8	RESULT 1  E84888 probable O- C; Species: C; Date: O2- C; Accession R; Lin, X.; M.; Koo, H. euss, D.; N Nature 402, A; Hile: See A; Reference A; Recession A; Status: A; Cross-ref C; Genetics: A; Gene At2 A; Map posit C; Superfami
225 VGEA 228 	181 CTDNGIMIAWNGIERLRAGLGILHDIEGIRYEPKCPLGVDISKE 224      : :	121 HLVKRTHRAILFCKQRDLLFQNNAVLVASGGVASNFYIRRALEILTNATQCTLLCPPPRL 180    :-    :-    :-  - :            - :   -	61 HFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQHTMAC 120  :  - - -	1 LLALVQGVSDFLLIGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKQGNRF 60      ;     ;       ;	Query Match 26.3%; Score 326; DB 2; Length 463; Best Local Similarity 33.6%; Pred. No. 4.3e-22; Matches 82; Conservative 34; Mismatches 84; Indels 44; Gaps 5;	RESULT 1  E84888  probable O-sialoglycoprotein endopeptidase [imported] - Arabidopsis thaliana (mouse-ear cress)  C;Species: Arabidopsis thaliana (mouse-ear cress)  C;Date: 02-Feb-2001   #sequence_revision 02-Feb-2001   #text_change 02-Jun-2003  C;Accession: E84888  R;Lin, X.; Kaul, S.; Rounsley, S.D.; Shea, T.P.; Benito, M.I.; Town, C.D.; Fujii, C.Y.;  M.; Koo, H.; Moffat, K.S.; Cronin, L.A.; Shen, M.; VanAken, S.E.; Umayam, L.; Tallon, L.  euss, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, J.  Nature 402, 761-768, 1999  A;Tille: Sequence and analysis of chromosome 2 of the plant Arabidopsis thaliana.  A;Reference number: A84420; MUID:20083487; PMID:10617197  A;Residues: 1-463 < STO>  A;Cross-references: GB:AE002093; NID:92583127; PIDN:AAB82636.1; GSPDB:GN00139  C;Superfamily: O-sialoglycoprotein endopeptidase  C;Superfamily: O-sialoglycoprotein endopeptidase

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R;Wood, D.W.; Setubal, J.C.; Kaul, R.; Monks, D.; Chen, L.; Wood, G.B.; Chen, erage, G.; Gillet, W.; Grant, C.; Guenthner, D.; Kutyavin, T.; Levy, R.; Li, i Karp, P.; Romero, P.; Zhang, S. Science 294, 2317-2323, 2001
A;Authors: Yoo, H.; Tao, Y.; Biddle, P.; Jung, M.; Krespan, W.; Perry, M.; Go
                                 S
                                                                                                                                                                                                                                                                                                                                                                                                   C;Accession: D97677

R;Goodner, B.; Hinkle, G.; Gattung, S.; Miller, N.; Blanchard, M.; Qurollo, B.; Goldman, A.; Liu, F.; Wollam, C.; Allinger, M.; Doughty, D.; Scott, C.; Lappas, C.; Markelz, B.; Science 294, 2323-2328, 2001

A;Title: Genome Sequence of the Plant Pathogen and Biotechnology Agent Agrobacterium tur A;Reference number: A97359; MUID:21608551; PMID:11743194

A;Accession: D97677
                                                                                                                                                                                                                                                                                                                    A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-366 <KUR>
A;Cross-references: GB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        probable o-sialoglycoprotein endopeptidase (glycoproteinase) (imported) - Agrobacterium C;Species: Agrobacterium tumefaciens C;Species: Agrobacterium tumefaciens 0;Date: 30-Sep-2001 #text_change 18-Nov-2002
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                                                                                                                                                                                                                                                                                  A; Gene: AGR C 4806
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                                                                                                                                                                                                                                         ;Superfamily: O-sialoglycoprotein endopeptidase
                                                                                                                                                                                                                                                                                                     ;Genetics:
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                                                                                                                                                                                                                                                             position: circular chromosome
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                                                                                                                                                                                Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FPLPRPMVGEARLDFSFSGLKTAVRQAATAIAPLSEQD-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PPPRLCTDNGIMIAWNGIERLRAGLGILHDIEGIRYEPKCPLGVDISKE 224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FDIKPPLHHAKNCDFSFTGL----QHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQHT 117
                                   FDIKPPLHHAKNCDFSFTGL----QHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQHT 117
FPLPRPMVGEARLDFSFSGLKTAVRQAATAIAPLSEQD
                                                                             LVI.VRGVGEYERWGTTIDDALGEAFDKTAKLLGL-PYP----
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O-sialoglycoprotein endopeptidase
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ilarity 31.9%;
Conservative
                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                      GB:AE007869; PIDN:AAK88373.1; PID:g15157858; GSPDB:GN00169
                                                                                                                                                                            19.7%; Score 244; DB 2; 31.9%; Pred. No. 1.1e-14;
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%; Pred. No. 1.1e-14;
34; Mismatches 92
                                                                                                                                                            34; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PIDN:AAL43632.1; PID:g17741154; GSPDB:GN00186
8 (Dupont)
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                                                                                                                                                                                                 Length 366;
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IADICASFQKA
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probable o-sialoglycoprotein endopeptidase (gcp) RP037 - Rickettsia prowazekii
C;Species: Rickettsia prowazekii
C;Date: 21-Nov-1998 #sequence_revision 21-Nov-1998 #text_change 09-Jul-2004
C;Accession: E71711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Map position: I
C;Superfamily: O-sialoglycoprotein endopeptidase
C;Keywords: hydrolase; metalloproteinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Molecule type: DNA
A;Residues: 1-359 <KUR>
A;Cross-references: GB:AB008917; PIDN:AAL51357.1; PID:g17982056;
A;Experimental source: strain 16M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R;DelVecchio, V.G.; Kapatral, V.; Redkar, R.J.; Patra, G.; Mujer, C.; Los, T.; Ivanova, .; Mazur, M.; Goltsman, B.; Selkov, E.; Elzer, P.H.; Hagius, S.; O'Callaghan, D.; Letess Proc. Natl. Acad. Sci. U.S. A. 99, 443-448, 2002
A;Title: The genome sequence of the facultative intracellular pathogen Brucella melitens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C;Species: Brucella
C;Date: 01-Feb-2002
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A; Experimental source:
C; Genetics:
A; Gene: gcp; RP037
C; Superfamily: O-sialog
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Reference number: AD3252; PMID:11756688
A;Accession: AB3274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Accession: AB3274
                                                                                                                               A; Molecule type: DNA
A; Residues: 1-387 < AND >
                                                                                                                                                                            A;Accession: E71711
A;Status: preliminary; nucleic acid sequence
                                                                                                                                                                                                                                   A; Title: The genome sequence of Rickettsia A; Reference number: A71630; MUID: 99039499;
                                                                                                                                                                                                                                                                                   R;Andersson, S.G.E.; Zomorodipour, A.; Andersson, J.O.; Sicheritz-Ponten, Nature 396, 133-140, 1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                E71711
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                                                                                                          A;Cross-references:
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Best Local S
Matches 69
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    246 AVADTLSDRVGRSLERFKTE--FPDCATPSLVVAGGVAANKTLRAALENLCTRHGFAFIA 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           145 MYLVRGIGDYERLGTTIDDALGEAFDKTAKLLGL-PYP-----GGPAVERMALQGDQKR 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        62 FDIKPPLHHAKNCDFSFTGL-----QHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 LALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKQGNRFH
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PPPRLCTDNGIMIAWNGIER 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TMACHLVKRTHRAILFCKQRDLLPQ-NNAVLVASGGVASNFYIRRALBILTNATQCTLLC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PPLNLCTDNAAMIAWAGAER
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     O-sialoglycoprotein endopeptidase
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                                                                                  UNIPROT:Q9ZEA8; (
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 241.5; DB 2;
Pred. No. 1.9e-14;
Pred. No. 1.7; Mismatches 77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    323
                                                                                  GB:AJ235270;
d E
                                                                                                                                                                                                                                      prowazekii and PMID:9823893
                                                                                                                                                                                    not
                                                                                                          GB:AJ235269; NID:g3860572; PIDN:CAA1450
                                                                                                                                                                                    shown; translation
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Cincession: H93572
R;Stover, C.K.; Pham, X.Q.; Brwin, adman, S.; Yuan, Y.; Brody, L.L.; (.; Lory, S.; Olson, M.V.
                                                                     C;Species: Pseudomonas aeruginosa
C;Date: 15-Sep-2000 #sequence_revision 15-Sep-2000 #text_change 31-Dec-2000
C;Accession: H83572
                                                                                                                                                     RESULT
H83572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R;Nierman, W.C.; Feldblyum, T.V.; Paulsen, I.T.; Nelson, K.E.; Bisen, J.; Heidelberg, J. B.; Laub, M.T.; DeBoy, R.T.; Dodson, R.J.; Durkin, A.S.; Gwinn, M.L.; Haft, D.H.; Kolon, J.; Ermolaeva, M.; White, O.; Salzberg, S.L.; Shapiro, L.; Venter, J.C.; Fraser, C.M. Proc. Natl. Acad. Sci. U.S.A. 98, 4136-4141, 2010
A;Title: Complete Genome Sequence of Caulobacter crescentus.
A;Reference number: A87249; MUID:21173698; PMID:11259647
A;Accession: F87257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 peptidase M22 family protein [imported] - Caulobacter crescentus C;Species: Caulobacter crescentus C;Date: 20-Apr-2001 #sequence_revision 20-Apr-2001 #text_change 10-May-2001 C;Accession: F87257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
F87257
                                                                                                                             O-sialoglycoprotein endopeptidase PA0580 [imported] - Pseudomonas aeruginosa
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C;Superfamily: O-sialoglycoprotein endopeptidase
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A;Residues: 1-367 <STO>
A;Cross-references: GB:AE005673; NID:gl3421168; PIDN:AAK22058.1; GSPDB:GN00148
C;Genetics:
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                                                                                                                                                                                                                                                                                                                                                                                             209 PRALLGRKDCDFSFSGLKTAAARIAETLTTDD:::
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                65 KPPLHHAKNCDFSFTGLQHVTDKIIMK-KEKEEGIEKGQILSSAADIAATVQHTMACHLV 123
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     h 19.2%; Score 237.5; DB 2; Similarity 34.3%; Pred. No. 4.6e-14; 73; Conservative 29; Mismatches 90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                      GIMIAWNGIERLRAGLGILHDIEGIRYEPKCPL
                                                                                                                                                                                                                                                                                                                 RVDRAMKLYK--DSHDPEDLRFVVAGGVAANGAVRAALLADCEKNGFSFAAPPLAYCTDN
                                                                                                                                                                                                                                                                                                                                                    RTHRAILFCKQRDLLPQNNAVLVASGGVASNFYIRRALEILTNATQCTLLCPPPRLCTDN 184
                                                                                                                                                                                                                                                                                                                                                                                                                                  KPPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQHTMACHLVK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SKMODAIRLYKOILNDYYEDINHPTKLNLKSFRKDEFNWKPLECITRPKYRIHIONSYRS
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; Pred. No. 4.4e-14;
32; Mismatches 74
                              Coulter,
                              A.L.; Mizoguchi, S.D.; Warrener, P.;
Coulter, S.N.; Folger, K.R.; Kas, A.;
                                                                                                                                                                                                                                 347
                                                                                                                                                                                                                                                                        217
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                            Hickey,
Larbig,
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                                                                                                                                                                                                                                                                                                                                                                                             259
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                            M.J.; Br
K.; Lim,
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R;Ogata, H.; Audic, S.; Renesto-Audiffren, P.; Fournier, P.E.; Barbe, V.; Samson, Science 293, 2093-2098, 2001
A;Title: Mechanisms of Evolution in Rickettsia conorii and Rickettsia prowazekii.
A;Reference number: A97700; MUID:21442074; PMID:11557893
A;Accession: E97707
                                                                                                                                                                                                                                                                                                                                                                                                                                                         C; Superfamily: O-sialoglycoprotein endopeptidase C; Keywords: hydrolase; metalloproteinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: DNA
A; Residues: 1-344 < KUR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C;Species: Rickettsia conorii
C;Date: 30-Sep-2001 #sequence_revision 30-Sep-2001
C;Accession: E97707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nature 406, 959-964, 2000
A;Title: Complete genome sequence of Pseudomonas aeruginosa PA01, an opportunistic A;Reference number: A82950; MUID:20437337; PMID:10984043
A;Accession: H83572
A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Cross-references: GB:AE006914; PIDN:AAL02599.1; PID:g15619097; GSPDB:GN00173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Status: preliminary
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C;Superfamily: O-sialoglycoprotein endopeptidase
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A; Residues: 1-341 <STO>
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Local Similarity 33.2%;
hes 64; Conservative 3
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                                            DNGIMIAWNGIER
                                                                                                                                                                                                                           KPPLHHAKNCDFSFTGLQHVTDKIIMK-KEKEEGIEKGQILSSAADIAATVQHTMACHLV 123
                                                                                                                                                                                                                                                                                                                   VQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKQGNRFHFDI 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LIKCRRAL---KQTGL--KN---LVIAGGVSANQALRSGLEKMLGEMKGQVFYARPRFC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FDIKPPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQHTMACH 121
                                                                                                                                                                                 PKPIINSGNCNMSFSGLKTAVRTLIMTLKEINDTV-----INDIAASFQFTIGEILS
                                                                                                                                                                                                                                                                          VLGLGKYKILGSTIDDAVGEAFDKVAKMLNL-----APPGGPEIEKRAKLGDPHKYKF
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33.8%; Pred. No. 1.6e-13;
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Pred. No. 1.9e-13;
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O-sialoglycoprotein endopeptidase (EC 3.4.24.57) - Haemophilus influenzae (strain Rd K) R,Alternate names: sialoglycoproteinase C;Date: lBeAug-1995 #sequence_revision 18-Aug-1995 #text_change 09-Jul-2004 C;Accession: H64074 R,Fleischmann, R.D.; Adams, M.D.; White, O.; Clayton, R.A.; Kirkness, E.F.; Kerlavage, Gocayne, J.D.; Soott, J.; Shirley, R.; Liu, L.I.; Glodek, A.; Kelley, J.M.; Weidman, D.M.; Brandon, R.C.; Fine, L.D.; Fritchman, J.L.; Fuhrmann, J.L.; Geoghagen, N.S.M., Science 269, 496-512, 1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Accession: H64074
A;Status: nucleic acid sequence not shown; transi
A;Status: type: DNA
A;Molecule type: DNA
A;Residues: 1-342 <TIGR>
A;Cross references: UNIPROT:P43764; GB:U32735; GB:C;Superfamily: O-sialoglycoprotein endopeptidase
C;Keywords: hydrolase; metalloproteinase
                                                                                                                                                                                                                                                                                       A;Authors: Utterback, T.; Cotton, M.D.; Spriggs, T.; Artiach, P. Smith, H.O.; Woese, C.R.; Venter, J.C.
A;Title: The complete genome sequence of the hyperthermophilic, A;Reference number: A69250; MUID:98049343; PMID:9389475
A;Accession: G69388
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G69388
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Species: Archaeoglobus fulgidus
C;Date: 05-Dec-1997 #sequence_revision 05-Dec-1997 #text_change 21-Jul-2000
C;Accession: G69388
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                                                                                                                                                                                               A;Molecule type: DNA
A;Residues: 1-323 <KLE>
A;Cross-references: GB:AE001027; GB:AE000782; NID:g2689350; PIDN:AAB90129.1; PID:g26494
                                                                                                                                                                                                                                                                                                                                                                                                       .; Fleischmann, R.D.; Quackenbush, Glodek, A.; Zhou, L.; Overbeek, R. Nature 390, 364-370, 1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              O-sialoglycoprotein endopeptidase homolog - Archaeoglobus fulgidus C;Species: Archaeoglobus fulgidus
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                           FCTDNGAMIAYTGFLRLKQG
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                                                                                                                                                                              O-sialoglycoprotein endopeptidase
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                                                                                        Conservative
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                                                                                                             17.9%; Score 221.5; 32.8%; Pred. No. 1.
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Pred. No. 7.3e-13;
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                                                                                          Mismatches
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                                                                                                                                DB 2;
  -GGPKIEELAKKGQKYHF--LP--YV
                                                                                                                                                                                                                                                                       shown; translation
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probable glycoprotease [imported] - Salmonella enterica subsp. e C;Species: Salmonella enterica subsp. enterica serovar Typhi A;Note: this species has also been called Salmonella typhi C;Date: 09-Nov-2001 #sequence_revision 09-Nov-2001 #text_change C;Accession: AG0892 R;Parkhill, J.; Dougan, G.; James, K.D.; Thomson, N.R.; Pickard, the months of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the
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A;Authors: Parry, C.; Quail, M.; Rutherford, K.; Simmonds, M.;
A;Title: Complete genome sequence of a multiple drug resistant
A;Reference number: AB0502; MUID:21534947; PMID:11677608
A;Accession: AG0892
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AG0892
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A; Residues: 1-337 < PAR>
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                                                                                                                                                                                                                                                                                                                                                                                                                     142 LISVTGIGQYELLGESIDDAAGEAFDKTAKLLGL-DYP-----GGPMLSKMASQGTAGR
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   TDNGAMIAYAGMVRFKA--GVTADL-GVTVRPRWPL
                                                                    TONGIMIAWNGIERLRAGLGILHDIEGIRYEPKCPL
                                                                                                                                                                                                     LVKRTHRAILFCKORDLLPQNNAVLVASGGVASNFYIRRALEILTNATQCTLLCPPPRLC 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                      LALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKQGNRFH
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                                                                                                                                        --MIKCK-RALESTGFKRLVMAGGVSANRTLRAKLAEMMQKRRGEVFYARPEFC
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A;Title: The complete genome of the hyperthermophilic bacterium Aqui A;Reference number: A70300; MUID:98196666; PMID:9537320 A;Accession: G70369 A;Status: preliminary; nucleic acid sequence not shown; translation A;Molecule type: DNA A;Residues: 1-335 <AQF>
                                                                                                                                                                                                                         sialoglycoproteinase - Aquifex aeolicus
C;Species: Aquifex aeolicus
C;Species: Aquifex aeolicus
C;Date: 08-May-1998 #sequence_revision 08-May-1998 #text_change 09-Jul-2004
C;Accession: G70369
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G70369
                                                                                                                                                      Nature 392, 353-358, 1998
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                                                                                                                                                                                                    Young, W.G.;
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o-sialoglycoprotein endopeptidase
C;Species: Pyrococcus abyssi
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Parkhill, J.; Wren, B.W.; Thomson, N.R.; Titball, R.W.; Holden, M.T.G.; Prentice, deno-Tarraga, A.M.; Chillingworth, T.; Cronin, A.; Davies, R.M.; Davis, P.; Dougan, il, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; Whitehead, S.; Barre Nature 413, 523-527, 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          probable glycoproteinase gcp [imported] - Yersinia pestis (strain CO92) C;Species: Yersinia pestis C:Date: 02-Nov-2001 #sequence_revision 02-Nov-2001 #text_change 09-Nov-2001 C;Accession: AI0079
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C;Superfamily:
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C;Superfamily: O-sialoglycoprotein endopeptidase
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A; Residues: 1-337 < KUR>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                193 YPLPKPLMEEGNLNFSFSGLK---TAILNLLKKEKNVRK-----EDIAYSFQETVVEI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         122 LVKRTHRAILFCKQRDLLPQNNAVLVASGGVASNFYIRRALEILTNATQ---CTLLCPPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       141 LYLVRDFGRYDFLGGTLDDAVGEAYDKVAKMLGL-GYP-----GGPIIDRLAKEGKKL-
                                                                                                                                                                                                                                                                                                                                                                                                                  ch 16.9%; Score 210; DB 2; 1 Similarity 30.0%; Pred. No. 1.4e-11; 65; Conservative 33; Mismatches 91
                                                                                                                                                                                                                                                                                                                                        2 LALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKQGNRFH
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                                                                                                                                                  CTDNGIMIAWNGIBRLRAGLGILHDIEGIRYBPKCPL 217
                                                                                                                                                                                             LAIKSKRA-
                                                                                                                                                                                                                              LVKRTHRAILFCKQRDLLPQNN-AVLVASGGVASNFYIRRALEILTNATQCTLLCPPPRL 180
                                                                                                                                                                                                                                                                   FTFPRPMTDRPGLDFSFSGLKTFAANTIRANGDDD-----QTRADIARAFEDAVVDT
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                                                                                                                CIDNGAMIAYAGMVRLRSN---LNSELSVSVRPRWPL
                                                                                                                                                                                                                                                                                                     FDIKPPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQHTMACH
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                                                                                                                                                                                       - LDOTGFKRLVIAGGVSANOTLRLKLADMMQKRGGEVFYARPEF
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                     (gcp)
                     PAB1159

    Pyrococcus abyssi (strain

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A;Cross-references: GB.BA000007; PIDN:BAB37370.1; PID:g13363420; GSPDB:GN00154
A;Experimental source: strain O157:H7, substrain RIMD 0509952
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gasawara, N.; Yasunaga, T.; Kuhara, S.; Shiba, T.; Hattori, M.; Shinagaw DNA Res. 8, 11-22, 2001
A;Title: Complete genome sequence of enterohemorrhagic Escherichia coli A;Reference number: A99629; MUID:21156231; PMID:11258796
A;Accession: C91122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    probable O-sialoglycoprotein endopeptidase [imported] - Escherichia coli (strain O157:H7
C;Species: Escherichia coli
C;Date: 18-Jul-2001 #semippoe vonicion con control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de control de contr
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C;Superfamily: O-sialoglycoprotein endopeptidase
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A;Molecule type: DNA
A;Residues: 1-337 <HAY>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Description: Pyrococcus A;Reference number: A75001 A;Accession: F75029
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C;Superfamily: O-sia
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A;Experimental source: strain Orsay
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A; Residues: 1-324 < KAW>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   135 VLALEGG--RYRVFGETLDIGIGNAIDVFARELGL-----GPPGGPKVEKLAEKGEKY 185
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                                                                                                                                                                                                                                                                                                                                               LISVTGIGQYELLGESIDDAAGEAFDKTAKLLGL-DYP-----GGPLLSKMAAQGTAGR
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Pred. No. 1.6e-11;
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      Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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## **ALIGNMENTS**

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RX Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RX Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RX Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RX Altschul S.F. Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RX Altschenko L., Marusina K., Farmer A.A., Rubin G.M., Hsieh F.,
RX Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RX Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RX Diatchenko L., Marusina K.J., Sonaldo M.F., Casavant T.L., Scheetz T.E.,
RX Diatchenko L., Marusina K.J., Sonaldo M.F., Casavant T.L., Scheetz T.E.,
RX Diatchenko L., Muzin B.D., Donaldo M.F., Casavant T.L., Scheetz T.E.,
RX Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RX Brownstein M.J., Wadin T.B., Toshiyuki S., Carninci P., Prange C.,
RX Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RX Raha S.S., Morley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RX Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RX Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RX Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RX Villalon B., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RX Mhiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RX Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RX Alther M. J., Skalska U., Smailus D.E., Schmerch A., Schein J.B.,
RX Alther M. J., Skalska U., Smailus D.E., Schmerch A., Schein J.B.,
RX Alther M. J., Skalska U., Smailus D.E., Schmerch A., Schein J.B.,
RX Alther M. J., Skalska U., Smailus D.E., Schmerch A., Schein J.B.,
RX Alther M. J., Skalska U., Smailus D.E., Schmerch A., Schein J.B.,
                                                                                                                                                         MEROPS; M22.004; -- MEROPS; M22.004; -- MEROPS; M22.004; -- MEROPS; M22.004; -- MEROPS; M22.00450; F:O-sialoglycoprotein endopeptidase activity; IRA. GO; GO:0006508; P:proteolysis and peptidolysis; IRA. InterPro; IPR000905; Peptidase_M22. InterPro; IPR000905; Peptidase_M22. Osialgl. Proteolysis in M22.00905; Peptidase_M22.
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01-DEC-2001
                                                                Pfam; PP00814; Peptidase M22; 1.
PIRSF; PIRSF004537; Osialglc pptds;
PRINTS; PR00789; OSIALOPTASE.
Probom; PD002367; Peptidase M22; 1.
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Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases
EMBL; BC011904; AAH11904.1; -.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM
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Mammalia; Eutheria; Primates;
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A536B333F5C6B8DD CRC64;
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Best Local :
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Q9H4B0;
01-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GO; GÓ:0008450; F:O-sialoglycoprotein endopeptidase activity; IEA.
GO; GO:0008270; F:zinc ion binding; IEA.
GO; GO:0008270; F:zinc ion binding; IEA.
GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
InterPro; IPR009905; Peptidase M22.
InterPro; IPR009180; Peptidase M22.
InterPro; IPR009180; Peptidase M22.
Pfam; PF00814; Peptidase M22; 1.
PRINTS; PR00789; OSIALOFTASE.
PRINTS; PR00789; OSIALOFTASE.
PRINTS; PR00789; OSIALOFTASE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chen J.M., Fortunato M., Barrett A.J.; Submitted (OCT-2000) to the EMBL/GenBank/DDBJ databases EMBL; AJ295148; CAC14666.1; -.
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Mammalia; Eutheria;
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01-MAR-2001 (TrEMBLrel. 16,
01-MAR-2004 (TrEMBLrel. 26,
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TIGRFAMs; TIGR00329; gcp; 1.
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FYIRRALEILTNATQCTLLCPPPRLCTDNGIMIAWNGIERLRAGLGILHDIEGIRYEPKC
                                                    CRYEKGQILSSAADIAATVQHTMACHLVKRTHRAILFCKQRDLLPQNNAVLVASGGVASN
                                                                                                                                                      HFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIFLISKVEQINIPGLCLKIAAHF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  439 AA;
                                                                                 -EKGQILSSAADIAATVOHTMACHLVKRTHRAILFCKQRDLLPQNNAVLVASGGVASN
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Primates;
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90.2%;
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                                                                                                                                                                                                                                                                                                                                                                                      Score 1213.5; DB 2; Length Pred. No. 1.3e-98;
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Pred. No. 5.6e-101;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
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RC STRAIN=CZECH II; TISSUE=Mammary tumor;

RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

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RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

RX MEDLINE=22388257; PubMed=12.1073/pnas.242603899;

RX MISSUE R. L., Peingold B.A., Grouse L.M., Schuler G.D.,

RX Alleschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

RX HOpkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RX Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hong L.,

RX Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hong L.,

RX Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hollahy S.J.,

RX Hopkins R.F., Jordan H., McEernan K.J., Malek J.A., Gunaratne P.H.,

RX Hopkins S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

RX Willalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,

RX Willalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,

RX Willalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,

RX Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

RX Hakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

RX RAM, Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,

RX Arnes S. T. Maxra M.A.
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Submitted (SEP-2003) to the EMBL/GenBank/DDBJ databases.

REMBL, BCO58172; AAH58172.1;

REGO; GO:0008450; F:O-sialoglycoprotein endopeptidase activit

R GO; GO:0008270; F:zinc ion binding; IEA.

R GO; GO:0006508; P:proteolysis and peptidolysis; IEA.

R InterPro; IPR000905; Peptidase M22;

R InterPro; IPR009180; Peptidase M22; 1.

R Pfam; PF00814; Peptidase M22; 1.

R PIRSP; PIRSP004537; Osialglc pptds; 1.

R PRINTS; PR00789; OSIALOPTASE.

PRODOM; PR007367; Peptidase M22; 1.
                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 205; Conserv
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"Generation and initial analysis of more than 15,000 and mouse cDNA sequences.";
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Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                      Hypothetical protein. SEQUENCE 414 AA; 4
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HPDIKPPLHHAKONCDFSFTGLQHVTDKIIMKKEKEEGIBKGQILSSAADIAATVQHTMAC
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01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-WAR-2004 (TrEMBLrel. 26, Last sequence update)
01-WAR-2004 (TrEMBLrel. 26, Last annotation update)
Mus musculus adult male corpora quadrigemina cDNA, RIKEN full-length
enriched library, clone:B230219017 product:similar to PUTATIVE
SIALOGLYCOPROTEASE TYPE 2.
                                                       STRAIN=C57BL/6J; TISSUE=Corpora quadrigemina;
MEDLINE=20530913; PubMed=11076861; DOI=10.1101/gr.152600;
MEDLINE=20530913; PubMed=11076861; DOI=10.1101/gr.152600;
Shibata K., Itch M., Aizawa K., Nagaoka S., Sasaki N., Carminci P.,
Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itch M.,
Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A.,
Yamamoto R., Matsumoto H., Sakaguchi S., Kegami T., Kashiwagi K.,
Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara B., Watshiki M.,
Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J.,
Okazaki Y., Muramateu M., Inoue Y., Kira A., Hayashizaki Y.,
*RIKEN integrated sequence analysis (RISA) system-384-format
cqucncing pipeline with 364 multicapiliary sequencer.*;
Genome Res. 10:1757-1771(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN=C57BL/6J; TISSUE=Corpora quadrigemina; MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100; MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100; Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., It Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.; Mormalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genome Res. 10:1617-1630(2000).
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SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Corpora quadrigemina;
MEDLINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
Carninci P., Hayashizaki Y.;
"High-efficiency full-length cDNA cloning.";
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Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
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STRAIN=C57BL/6J; TISSUE=Corpora
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the RIKEN Genome Exploration Research Group Phase I & II Team; "Analysis of the mouse transcriptome based on functional annotation 60,770 full-length cDNAs."; Nature 420:563-573(2002).
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   SEQUENCE FROM N.A
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MEDLINE=21085660; PubMed=11217851; DOI=10.1038/35055500;
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Adachi J., Aizawa K., Akimura T., Arakawa T., Bono H., Carninci P.,
Adachi J., Aizawa K., Akimura T., Arakawa T., Bono H., Carninci P.,
Pukuda S., Furuno M., Hanagaki T., Hara A., Hashizume W.,
A Hayashida K., Hayatsu N., Hiramoto K., Hiraoka T., Kasukawa T.,
A Hori F., Imotani K., Ishii Y., Itoh M., Kagawa I., Kasukawa T.,
A Katoh H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Koya S.,
A Kurihara C., Matsuyama T., Miyazaki A., Murata M., Nakamura M.,
A Nishi K., Nomura K., Numazaki R., Ohno M., Ohsato N., Okazaki Y.,
A Nishi K., Nomura K., Numazaki R., Ohno M., Ohsato N., Okazaki Y.,
A Saito R., Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H.,
Basaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.
A Tagawa A., Takahashi F., Takaku-Akahira S., Takeda Y., Tanaka T.,
A Tomaru A., Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y.,
EMBL, AKO45669; BAC32450.1; -.
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Best Local Similarity
Matches 205; Conserv
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GO; GO:0008233; F:peptidase activity; IEA.
GO; GO:0008270; F:zinc ion binding; IEA.
GO; GO:0008508; P:proteolysis and peptidolysis; IEA.
InterPro; IPR00905; Peptidase M22.
InterPro; IPR009180; Pept M22_Osialgl.
Pfam; PF00814; PED1dase M22; 1.
PIRSF; PIRSF004537; Osialglc_pptds; 1.
PRINTS; PR00789; OSIALOPTASE.
PRODOM; PD002367; Peptidase_M22; 1.
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Q9D0N0;
01-JUN-2001
                                                                                                      NCBI_TaxID=10090;
[1]
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01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last amotation update)
01-mar.sunus 10 days embryo whole body cDNA, RIKEN
enriched library, clone:2610001M19 product:similar
SIALOGLYCOPROTEASE TYPE 2.
                                                SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUB=Whole body;
MEDLINB=99279253; PubMed=10349636;
                                                                                                                                                                     Name=Osgepl1;
Mus musculus (Mouse)
                                    Carninci
                                                                                                                                       Eukaryota; Metazoa;
Mammalia; Butheria;
                 Carninci P., Hayashizaki Y.;
"High-efficiency full-length cDNA cloning.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TIGRFAMS; TIGR00329;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEROPS; M22.004;
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   Enzymol. 303:19-44(1999).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HLVKRTHRAILFCKQRDLLPQNNAVLVASGGVASNFYIRRALEILTNATQCTLLCPPPRL
                                                                                                                                                                                                                                                                                                                                                                                                               CTDNGIMIAWNGIERLRAGLGVLHDVEDIRYEPKCPLGVDISREVAEAAIKVPRLKMAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HLAKRTHRAILFCKQKNLLSPANAVLVVSGGVASNLYIRKALEIVANATQCTLLCPPPRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HFDIKPFLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQHTMAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LLALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEQLAKDGNRF
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                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
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                                                                                                                                      Chordata;
Rodentia;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 1079; D
Pred. No. 9.1e
14; Mismatches
                                                                                                                                    Craniata; Vertebrata;
Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9A2D27B576C7DB24 CRC64;
                                                      DOI=10.1016/S0076-6879(99)03004-9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9.1e-87;
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                                                                                                                                      Muridae;
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to PUTATIVE
                                                                                                                                                       Euteleostomi;
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                                                                                                                                      Murinae;
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EP SEQUENCE FROM N.A.

(C) STRAIN-C57BL/6J; TISSUE=Whole body;

(S) STRAIN-C57BL/6J; TISSUE=Whole body;

(M) Shibata K. Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P.,

(A) Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M.,

(A) Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A.,

(A) Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K.,

(A) Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K.,

(A) Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,

(A) Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,

(A) Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,

(A) Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,

(A) Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,

(A) Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,

(A) Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,

(A) Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,

(A) Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,

(A) Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,

(A) Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,

(A) Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,

(A) Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,

(A) Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,

(A) Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,

(A) Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,

(A) Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,

(A) Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,

(A) Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,

(A) Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,

(A) Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,

(A) Pujiwake S., Inoue Y., Kita M., Inoue Y., Kita M., Inoue Y., Kita M
Query Match
Best Local Sim
Matches 204;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN=C57BL/6J; TISSUE=Whole body;
Adachi J., Aizawa K., Akahira S., Akimura T., Arai A., Aono H.,
Arakawa T., Bono H., Carrinici P., Fukuda S., Fukunishi Y., Furuno M.,
Arakawa T., Bono H., Carrinici P., Fukuda S., Fukunishi Y., Furuno M.,
Hanagaki T., Hara A., Hayatsu N., Hiramoto K., Hiraoka T., Hori F.,
Imotani K., Ishii Y., Itoh M., Izawa M., Kasukawa T., Kato H.,
Kawai J., Kojima Y., Konno H., Kouda M., Koya S., Kurihara C.,
Matsuyama T., Miyazaki A., Nishi K., Nomura K., Numazaki R., Ohno M.,
Okazaki Y., Okido T., Owa C., Saito H., Saito R., Sakai C., Sakai K.,
Okazaki Y., Okido T., Owa C., Saito H., Saito R., Sakai C., Sakai K.,
Okazaki Y., Okido T., Owa C., Saito H., Saito R., Sakai C., Sakai K.,
Sano H., Sasaki D., Shibata K., Shibata Y., Shinagawa A., Shiraki T.,
Sogabe Y., Suzuki H., Tagami M., Tagawa A., Takahashi F., Tanaka T.,
Tejima Y., Toya T., Yamamura T., Yasunishi A., Yoshida K., Yoshino M.,
Muramatsu M., Hayashizaki Y.;
Submitted (JUL-2000) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN=C57BL/6J; TISSUE=Whole body;
MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;
Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., It
Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;
"Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new ge
Genome Res. 10:1617-1630(2000).
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SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Whole body;
MEDLINE=21085660; PubMed=11217851; DOI=10.1038/35055500;
                                                                                                                                                                     ProDom; PI
TIGRFAMs;
                                                                                                                                                                                                                                                  GO; GO:0008450; F:O-sialoglycoprotein endopeptidase activity; IEA.
GO; GO:0008270; F:zinc ion binding; IEA.
GO; GO:0008270; F:zinc ion binding; IEA.
GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
InterPro; IPR0003905; Peptidase M22.
InterPro; IPR0003905; Peptidase M22.
InterPro; IPR0003905; Peptidase M22.
PROMERS PROSE004537; Osialglc_pptds; 1.

PROMERS PROSE004537; Osialglc_pptds; 1.
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the RIKEN Genome Exploration Research Group Phase I & II
"Analysis of the mouse transcriptome based on functional
60,770 full-length CDNAs.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN=C57BL/6J; TISSUE=Whole
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                                                                                                                                                                        PRINTS; PR00789; OSIALOPTASE.
ProDom; PD002367; Peptidase_M22; 1.
TIGRFAMs; TIGR00329; gcp; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; AK011265; BAB27506.1; MEROPS; M22.004; -.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MGI:1919335;
                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FROM N.A.
                                                                                                                   414
  Conservative
                                                                                                                   AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Osgepl1.
                                                                                                                   44999 MW;
                             86.4%;
                                                                                                                                                                     gcp;
  14;
                             Score 1071;
Pred. No. 4
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                                                                                                                999BC689944DDB24 CRC64;
  Mismatches
                             4.6e-86;
                                                           В
                                                           2;
                                                           Length 414;
     Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 genes.";
  Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Whender 12477932; DOI=10.1073/pnas.242603899;
Whynder 12477932; DOI=10.1073/pnas.242603899;
XX Strausberg R.L., Peingold E.A., Grouse L.H., Derge J.G.,
XX Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
XX Altschul S.F., Zeoberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
XX Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
XX Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
XX Lington M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
XX Lington M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
XX Langleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
XX Langleton M., Soares M.B., Bonaldo M.F., Carninci P., Prange C.,
XX Langleton M., Soares M.B., Bonaldo M.F., Carninci P., Prange C.,
XX Alakasis, Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
XX Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
XX Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
XX Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
XX Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
XX Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
XX Pahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
XX Aniting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
XX Aniting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
XX Annes S. J. Malex U., Shalska U., Smailus D.E., Schmerch A., Schein J.E.,
XX Annes S. J. Malex U., Shalska U., Smailus D.E., Schmerch A., Schein J.E.,
XX Annes S. J. Malex U., Shalska U., Smailus D.E., Schmerch A., Schein J.E.,
                                                            Submitted (AUG-2004) to the EMBL/GenBank/DDBJ databases.

R EMBL; BC078974; AAH78974.1; -

R GO; GO:0008450; F:O-sialoglycoprotein endopeptidase activit
R GO; GO:0008270; F:zinc ion binding; IEA.
R GO; GO:0008270; F:proteolysis and peptidolysis; IEA.
R GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
R InterPro; IPR000905; Peptidase_M22.
R InterPro; IPR000180; Pept M22_Osialgl.
R InterPro; IPR00216; Peroxidase.
R Pfam; PF00814; Peptidase_M22; 1.
R Pfam; PF00814; Peptidase_M22; 1.
R Pfam; PF00789; OSIALOPTASE.
R PRINTS; PR00789; OSIALOPTASE.
R PFODOm; PD002367; Peptidase_M22; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q6AYN7;
Q6AYN7;
25-OCT-2004
25-OCT-2004
25-OCT-2004
                                                                                                                                                                                                                                                                                                                                                                                                                  With Mark M.A.;

Jones S.J., Marra M.A.;

Jones S.J., Marra M.A.;

"Generation and initial analysis of more than 15,000 and mouse cDNA sequences.";

Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hypothetical protein (Fragment)
Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                            TISSUE=Testis;
Director MGC Project;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=10116;
                     TIGRFAMS; TIGR00329; gcp; 1.
PROSITE; PS00435; PEROXIDASE_1; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
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Rodentia;
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                                                                                                                                                                RA Ota T. Suzuki Y. Nishikawa T. Otsuki T. Sugiyama T. Irie R. Wakamatsu A. Hayashi K. Sato H. Nagai K. Kimura K. Makita H., RA Wakamatsu A. Hayashi K., Sato H. Nagai K. Kimura Y. Makata T. Ishii S., RA Sekine M., Obayashi M., Nishi T., Ishibahara T. Tanaka T. Ishii S., RA Sekine M., Obayashi M., Nishi T., Ishiohara T. Tanaka T. Ishii S., RA Yamamoto J., Saito K. Kawai Y. Isono Y. Makamura Y. Nagahari K. RA Murakami K. Yasuda T. Iwayanagi T. Wagatsuma M. Shiratori A. RA Murakami K. Yasuda T., Iwayanagi T., Wagatsuma M., Shiratori A. RA Ninomiya K., Ishidas T., Kodaira H., Kikawa E. Omura Y. Na Abe K. Kamihara K. Katsuta N. Sato K., Tanikawa M., Yamazaki M., RA Ninomiya K., Ishidashi T., Yamashita H., Murakawa E., Omura Y., RA Ninomiya K., Takahashi Fujii A., Hara H., Tanase T., Nomura Y., RA Minomiya T., Takahashi Fujii A., Hara H., Tanase T., Nomura Y., RA Togiya S., Komai F., Hara R., Takeuchi K., Arita M., Imose N., Na Togiya S., Komai F., Hara R., Takeuchi K., Arita M., Imose N., Na Yoshikawa Y., Matsunawa H., Ichihara T., Shiohata N., Sano S., RA Yoshikawa Y., Matsunawa H., Ichihara T., Shiohata N., Sano S., Na Yoshikawa S., Senoh A., Mizoguchi H., Goto Y., Shimizu F., Wakebe H., RA Yamazaki M., Watanabe T., Sugiyama A., Takemoto M., Kawakami B., Pujimori Y., Komiyama H., Satoh N., Tanigami A., Pujiwara T., RA Yamazaki M., Watanabe T., Sugiyama A., Itakura S., Fukuzuni Y., RA Yamazaki M., Watanabe K., Kumagai A., Itakura S., Fukuzuni Y., RA Yamazaki M., Watanabe K., Kumagai A., Itakura S., Fukuzuni Y., RA Yamazaki M., Watanabe K., Kumagai A., Itakura S., Fukuzuni Y., RA Yamazaki M., Matanura Y., Obatake N., Inagaki H., Ikema Y., Okamoto S., RA Mizushi M., Watanabe M., Kanatura Y., Okamoto S., Satoh T., Shirai Y., Takahashi Y., Nakagawa K., RA Mizushi M., Watanabe T., Nakamura Y., Ohara O., Trakahashi Y., Yamashita R., RA Mizushi H., Masuho Y., Yamashita R., Nakamura Y., Ohara O., Trakahashi Y., Yamashita R.,
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Best Local
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Matsumura K., No..., Hace Togashi T., Oyama M., Hace Togashi T., Shirmizushima-Sugano J., Satoh T., Shirmiza K., Nagase T., Nomura N., K
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Q96NH5;
Q1-DEC-2001
01-DEC-2001
01-MAR-2004
Nat. Genet.
EMBL; AK0554
MEROPS; M22.
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Mammalia; Eutheria;
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Ota T., Suzuki Y., Nishikawa T., Ots
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467
                            36:40-45(2004).
441; BAB70923.1;
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(TrEMBLrel. 19, Last
(TrEMBLrel. 26, Last
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50799 MW;
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                                                                                                                       ra Y., Ohara O., characterization
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Pred. No. 3.1e-78;
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                                                                                                                    Isogai T., Sugano S.;
of 21,243 full-length human
                                                                                                                                                                                   H., Masuho Y., Yamashita R.
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Submitted (SEP-2003) to the EMBL/GenBank/DDBJ databases.

EMBL, AL591593; CAD43471.1; -.

REMBL, AL591593; CAD43471.1
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Q8JFW3;
01-OCT-2002
01-OCT-2002
01-MAR-2004
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Eukaryota; Metazoa; Chordata;
Actinopterygii; Neopterygii; T
Cyprinidae; Danio.
NCBI_TaxID=7955;
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GO; GO:0008270; F:zinc ion binding; IEA.
GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
InterPro; IPR001905; Peptidase M22.
InterPro; IPR001905; Peptidase M22.
InterPro; IPR00180; Pept M22 GBialgl.
Pfam; PP00814; Peptidase M22; 1.
PIRSF; PIRSF004537; Osialglc_pptds; 1.
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SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TIGRFAM8;
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                                                                                                                                                                                                   TIGR00329;
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(TrEMBLrel. 22, 1
(TrEMBLrel. 26, 1
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      Conservative
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                                                                                                                                   43956 MW;
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Last annotation updat
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                                     Score 751; DB 2;
Pred. No. 7.9e-58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ) (Danio rerio).; Craniata; Vert
Teleostei; Osta
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                                                                                                                                   3A6B1DD050737E35 CRC64;
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                                 7.9e-58;
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                                                                   Length 404;
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R EMBL; AL672217; CAD43443.1; -.

R MEROPS; M22.004; -.

R GO; GO:0008450; F:O-sialoglycoprotein endopeptidase activity; IEA.

R GO; GO:0008233; F:peptidase activity; IEA.

R GO; GO:0008270; F:zinc ion binding; IEA.

R GO; GO:0008270; F:zinc ion binding; IEA.

R GO; GO:0006508; P:proteolysis and peptidolysis; IEA.

R GO; GO:0006508; P:proteolysis and peptidolysis; IEA.

R InterPro; IPR000905; Peptidase M22.

R InterPro; IPR009180; Peptidase M22; 1.

R PIRSF; PIRSF006137; OsialGlc. pptds; 1.

R PIRSF; PR00789; OSIALOPTASE.

R PRODOM; PD002367; Peptidase M22; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 145;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
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01-MAR-2004 (TrEMBLrel. 22, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
SI:dZ72B14.6 (Novel glycoprotease).
Name-SI:dZ72B14.6;
Brachydanic variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q8JFR7
Q8JFR7;
01-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Protease.
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Brachydanio rerio (Zebrafish) (Danio rerio).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii, Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
Cyprinidae; Danio.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Clark G.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TIGRFAMs; TIGR00329; gcp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=7955;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                  HFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQHTMAC 120
                                                                                                                                                                                                                                                                                                                                                                           LLALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKQGNRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTDNGIMIAWNGIERLRAGLGILHDIEGIRYEPKCPLGVDISKEVGEASIKVPQLKM 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AFHFISPMGQNYDCNPSFAGLRTQITGAINKXEKEEGVEAGQFLSCVKDIAAASQHTVAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQHTMAC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LLALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKQGNRF
                                                                                                           HLVKRTHRAILFCKQRDLLPQNNAVLVASGGVASNFYIRRALEILTNATQCTLLCPPPRL 180
                                                                                                                                                                                                                          AFHF I SPMGQNYDCNFSFAGLRTQITGAINKKEKEEGVEAGQFLSCVKDIAAASQHTVAS
                                                                                                                                                                                                                                                                                                                                        LLALAKGIDEFLLLGQTLDEAAGDTLDKIARRLSLRNHPECGTLSGGQAIERLAKEGDQL
                                                    CTDNGIMIAWNGIERLRAGLGILHDIEGIRYEPKCPLGVDISKEVGEASIKVPQLKM 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LLALAKGIDEFLLLGQTLDEAAGDTLDKIARRLSLRNHPECGTLSGGQAIERLAKEGDRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   404 AA; 44027 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Peptidase_M22; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60.2%;
33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 747; DB 2;
Pred. No. 1.8e-57;
3; Mismatches 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6FE98653A651860F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             404
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RESULT

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RESULT 11
Q960S6
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Q7Q918;
Q1-MAR-2004
                                                                                                                           Q960S6;
Q960S6;
01-DEC-2001
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GO; GO:0008450; F:O-sialoglycoprotein endopeptidase activity; IEA.

GO; GO:0008270; F:proteolysis and peptidolysis; IEA.

GO; GO:0006508; P:proteolysis and peptidolysis; IEA.

InterPro; IPR00905; Peptidase M22.

InterPro; IPR009180; Pept M22 Osialgl.

Pfam; PF00814; Peptidase M22; 1.

PIRSF; PIRSF004537; Osialglc pptds; 1.

PRINTS; PR0789; OSIALOPTASE.

ProDom; PD002367; Peptidase M22; 1.
Drosophila melanogaster (Fruit fly).

Bukaryota; Metazoa; Arthropoda; Insecta; Pterygota;

Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;

Ephydroidea; Drosophilidae; Drosophila.

NCBI_TaxID=7227;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
STRAIN=PEST;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Anopheles gambiae str. PEST.
Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Nematocera; Culicoidea; Anopheles.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AgCP14990 (Fragment).
Name=agCG46164; ORFNames=ENSANGG00000007922;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-MAR-2004 (TrEMBLrel.
01-MAR-2004 (TrEMBLrel.
                                                                        ORFNames=CG14231;
                                                                                                  01-DEC-2001
01-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TIGREAMS; TIGR00329; gcp; 1.
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                                                                                      LD37221p.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     pheles Genome Sequencing Consortium;
mitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.
CAUTION: The sequence shown here is derived from an
EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       preliminary data.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 147
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                                                                                                                                                                                                                            385 CKWAKVDI
                                                                                                                                                                                                                                                      232 VPQLKMEI 239
                                                                                                                                                                                                                                                                                                            174
                                                                                                                                                                                                                                                                                                                                     265 KGVTRHMLHRTQRAIEYCERRKLFSDAEPHRSLVVSGGVACNDVIFNALSSMAAQFGYST
                                                                                                                                                                                                                                                                                                                                                                                                                     58 --NRFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQ 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 LLALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKQG---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity 36.:
90; Conservative
                                                                                                                                                                                                                                                                                                                                                                                           DTSAYEPPL--PLSKYRDCQFSFAGLKNTATRHILERESTLHLAPDALLPDYEAFCACFL
                                                                                                                                                                                                                                                                                                          LCPPPRLCTDNGIMIAWNGIERLRA--GLGILHDIEGIRYEPKCPLGVDISKEVGEASIK 231
                                                                                                                                                                                                                                                                                                                                                               HTMACHLVKRTHRAILFCKQRDLL--PQNNAVLVASGGVASNFYIRRALEILTNATQCTL
                                                                                                                                                                                                                                                                                                                                                                                                                                                 LLVFVESTARFRLLGETLDDAPGEALDKIARRLKLRNVAKYAQMSGGQAIEAAAQQAGAK 206
                                                                                                                                                                                                                                                                                 YRPPKKLCTDNGTMIAWNGMEKLLAKDTAEMTTKYEQVDISGKCPIGDSLIDDVKEANIA
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                                                                                                  (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
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                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                            392
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                                                                                                  Last sequence update)
Last annotation updat
                                                                                                                             Created)
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Pred. No. 1.9e-23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CC9426723D3FD4F1 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
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                                                                                                   update)
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RESULT 12

QOVWD

AC QOVWD

AC QOVWD

AC QOVWD

DT 01-MA

DT 01-MA

DT 01-MA

DT 01-MA

CG142

GN ORFNO

OC Bukar

OC Ephydd

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A Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
A Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
A George R.A., Lewis S.B., Richards S., Ashburner M., Henderson S.N.,
A George R.A., Lewis S.B., Yandell M.D., Zhang Q., Chen L.X.,
A Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
A Brandon R.C., Rogers Y.H., Blazej R.G., Champe M., Pfeiffer B.D.,
A Brandon R.C., Rogers Y.H., Blazej R.G., Champe M., Pfeiffer B.D.,
A Man K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Gabor G.L.,
A Abril J.F., Agbayani A., An H.J., Andrews Pfannkoch C., Baldwin D.,
A Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Besley E.M.,
A Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P.,
A Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P.,
A Borti S.C., Dusam D.A., Butler H., Cadieu E., Center A., Chandra I.,
Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
A de Pablos B., Delcher A., Deng Z., Mays A.D., Dew I., Dietz S.M.,
Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nunco J., Pacleb J., Paragas V., Park S., Phouanenavong S.,
A Yu C., Lewis S.E., Rubin G.M., Celniker S.;
Submitted (AMC-2001) to the EMBL/GenBank/DDBJ databases.

EMBL; AX051882; AAK93306.1; -.

R FlyBase; FBggn031060; CG14231.

R GO; GO:0008450; F:0-sialoglycoprotein endopeptidase activit R GO; GO:0008270; F:zinc ion binding; IEA.

R GO; GO:0008270; F:proteolysis and peptidolysis; IEA.

InterPro; IPR000910; Peptidase M22.

InterPro; IPR009180; Peptidase M22.

R InterPro; IPR009180; Peptidase M22.

Pfam; PF00814; Peptidase M22; 1.

Pfam; PF00814; Peptidase M22; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Arthropoda; Hexapoda; Inso
Neoptera; Endopterygota; Diptera; Brachycera;
Ephydroidea; Drosophilidae; Drosophila.
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                                                                                                                                                                                                                                                                                                                                                      MEDLINE=20196006; PubMed=10731132; DOI=10.1126/science.287.5461.2185;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Drosophila melanogaster (Fruit fly).
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Durbin K.J., Evangelista C.C., Ferraz C., Ferriera S., Fleischmann W. RA Posler C., Gabrielian A.E., Garg N.S., Gelbart W.M., Glasser K., RA Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M., RA Glodek A., Gong F., Gorrell J.H., Ke Z., Guan P., Harris M., RA Hostin D., Houston K.A., Howland T.J., Wei M.H., Ibegwam C., Jalain M., Kalush F., Karpen G.H., Ke Z., Kennison J.A., Ketchum K.A. Alak Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z., Li Z., Liang Y., Lin X., RA Liu X., Mattei B., McIntosh T.C., McLeod M.P., McPherson D., McIntosh T.C., McLeod M.P., McPherson D., Milshina N.V., Mobarry C., Morris J., Moshrefi A., RA Menkulov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A., RA Menkulov G., Milshina N.V., Nobarry C., Morris J., McPherson D., RA, Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G., Ra Reinert K., Remington K., Saunders R.D., Scheeler F., Shen H., RA Alazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G., Ra Reinert K., Remington K., Saunders R.D., Scheeler F., Shen H., RA Spier B., Syieradling A.C., Stapleton M., Stupski M.P., Smith T., RA Spier B., Spradling A.C., Stapleton M., Stupski M.P., Smith T., RA Spier B., Spradling A.C., Stapleton M., Stupski M.P., Smith T., RA Wallsiams S.M., Woodsget, Worley K.C., Wu D., Yang S., Yao Q.A., Ye J. Zheng X.H., Zhong F.N., Zhong W., Zhou X., Zhao Q., Zheng L., Ala Zheng X.H., Zhong F.N., Zhong W., Zhou X., Zhu X., Smith H.O. Zheng X.H., Wers E.W., Rubin G.M., Venter J.C.;
"The genome sequence of Drosophila melanogaster.";
                                                                                                                                                                                                                                                                                                                                                      Misra S., Crosby M.A., Mungall C.J., Matthews B.B., Campbell K.S., Hradecky P., Huang Y., Kaminker J.S., Millburn G.H., Prochnik S.E. Smith C.D., Tupy J.L., Whitfied E.J., Bayraktaroglu L., Berman B.P. Bettencourt B.R., Celniker S.E., de Grey A.D., Drysdale R.A., Harris N.L., Richter J., Russo S., Schroeder A.J., Shu S.Q., Stapleton M., Yamada C., Ashburner M., Gelbart W.M., Rubin G.M.,
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             FlyBase; FBgm0031060; CG14231.
GO: GO:0008450; F:O-sialoglycoprotein endopeptidase activity;
GO; GO:0008270; F:zinc ion binding; IEA.
GO: GO:0008270; F:proteolysis and peptidolysis; IEA.
                                                                    IntAct; Q9VWD6;
FlyBase; FBgn003
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Kaminker J.S., Bergman C.M.
Patel S., Frise E., Wheeler
Pathburner M., Celniker S.E.
                                                                                                           EMBL; AE003513;
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1. 3:RESEARCH0083-RESEARCH0083(2002)
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3:RESEARCH0079-RESEARCH0079(2002)
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PIRSP; PIRSF004537; Osialglc pptd8; 1 PRINTS; PR00789; OSIALOPTASE.
PRODOM; PD002367; Peptidase M22; 1.
TIGRPAMS; TIGRO0329; gCp; 1.
SEQUENCE 409 AA; 45328 MW; 9797F6
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"Anissuehl K., Adamska I.;

"Anissuehl K., 2001) to the
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Goldsmith A.D., Lee J.M., Quach H.L., Toriumi M., Yu G., Bo
Carninci P., Chen H., Cheuk R., Hayashizaki Y., Ishida J.,
Kamiya A., Karlin-Neumann G., Kawai J., Kim C., Lam B., Lin
Miranda M., Narusaka M., Nguyen M., Palm C.J., Sakurai T.,
Seki M., Shinn P., Southwick A., Shinozaki K., Davis R.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A. Rounsley S.D., Lin X., I Sykes S.M., Mason T.M., Venter J.C.;
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Eukaryota; Viridiplantae; Streptophyta; Embryophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eueurosids II; Brassicales; Brassicaceae; Arabidopsis.
   Yamada K., Banh J., C
Deng J.M., Goldsmith
Tang C., Toriumi M.,
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D., Kaul S.;
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th A.H.C., Y
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Pred. No. 6.9e
38; Mismatches
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         Yamamura
      Chang C.H., Chang E J.M., Onodera C.S., Yamamura Y., Yu G.,
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R., Adams M.D., Somer
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Somerville
                                                                   Dale J.M.,
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, Bowser L.,
Jones T.,
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                                 SEQUENCE FROM N.A.

TISSUB=Floral meristem 5-10 days when regenerated in vitro;
Fan J.H., Ma Y., Zhang X.S.;
Fan J.H., Ma Y., Zhang X.S.;
"Hyacinthus orientalis O-sialoglycoprotein endopeptidase like mRNA, expressed during regeneration of floral bud.";
Submitted (AUG-2003) to the EMBL/GenBank/DDBJ databases.
EMBL; AY389554; AA708652.1; -.
                                                                                                                                                                                                                                                                                 O-sialoglycoprotein endop
Hyacinthus orientalis.
Eukaryota, Viridiplantae,
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Seki M., Shinn P.,
                                                                                                                                                                                                                                                               Spermatophyta; Magnoliophyta;
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InterPro; IPR000
PRINTS; PR00789;
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NCBI_TaxID=82025;
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                    IPR000905;
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Narusaka M., Nguyen M., Palm
inn P., Southwick A., Shinozal
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905; Peptidase_M22
OSIALOPTASE.
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-Neumann G., Ka
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Last annotation update)
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Pred. No. 4.7e
                                                                                                                                                                                                                                                               Liliopsida;
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M., Palm C.J., Sakurai T., Shinozaki K., Davis R.W.,
                                                                                                                                                                                                                                                                                                                                (Fragment).
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a; Asparagales;
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                                                                                                                                                                                                                                                                                                                                                      Sinorhizobium meliloti strain 1021.";

EProc. Natl. Acad. Sci. U.S.A. 98:9877-9882 (2001).

EMBL; AL591792; CAC47657.1; -...

R GO; GO:0016787; F:hydrolase activity; IEA.

R GO; GO:0008450; F:O-sialoglycoprotein endopeptidase activity; IEA.

R GO; GO:0008598; F:Proteolysis and peptidolysis; IEA.

R GO; GO:0006598; P:proteolysis and peptidolysis; IEA.

R InterPro; IPR000905; Peptidase M22.

R InterPro; IPR00905; Peptidase M21.

R InterPro; IPR00189; Peptidase M22.

R InterPro; IPR009180; Peptidase M21.

R Pfam; PF00814; Peptidase M22.

R PF1NTS; PR00789; OSIALOPTASE.

PRINTS; PR00789; OSIALOPTASE.

PRINTS; PR00789; OSIALOPTASE.

PRINTS; PR00789; OSIALOPTASE.

PRIGRPAMS: TIGRON379; Peptidase M22; 1.
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Best Local S
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Best Local (
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Q92LH8;
Q92LH8;
Q92LH8;
Q1-DEC-2001 (TremBLrel. 19, Created)
Q1-DEC-2001 (TremBLrel. 19, Last sequence update)
Q1-MAR-2004 (TremBLrel. 26, Last annotation update)
Q1-MAR-2004 (TremBLrel. 26, Last annotation update)
Q1-MAR-2004 (TremBLrel. 26, Last annotation update)
Q1-MAR-2004 (TremBLrel. 26, Last annotation update)
Q1-MAR-2004 (TremBLrel. 26, Last annotation update)
Q1-MAR-2004 (TremBLrel. 26, Last annotation update)
Q1-MAR-2004 (TremBLrel. 26, Last annotation update)
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NON TER
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Complete proteome; Hydrolase.
SEQUENCE 360 AA; 37906 MW;
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Rhizobium meliloti (Sinorhizobium meliloti).
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      145
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   LILVKGVGEYERWGTTIDDALGEAFDKTAKLLGL-PYP----
                                                                 LALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKQGNRFH
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28516 MW; 529D22666C284106 CRC64;
                                                                                                                                  21.2%; Score 262.5; DB 2; 32.8%; Pred. No. 9e-15; ive 32; Mismatches 85;
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Search completed: November 10, 2005, 16:52:03 Job time: 58.9315 secs

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Result
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Maximum Match 100%
Listing first 45 summaries
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Perfect score:
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
DB
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Match
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1: /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*

2: /cgn2_6/ptodata/1/iaa/5B_COMB.pep:*

3: /cgn2_6/ptodata/1/iaa/6A_COMB.pep:*

4: /cgn2_6/ptodata/1/iaa/6B_COMB.pep:*

5: /cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*

6: /cgn2_6/ptodata/1/iaa/backfiles1.pep:*
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GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd.
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US-09-489-039A-9221

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US-10-067-443-4

US-10-067-443-5

US-09-107-532A-6609

US-09-107-532A-6609

US-09-107-732A-148

US-09-710-279-728

US-09-710-279-728

US-09-602-777A-148

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                 Sequence 22, Appli Sequence 19, Appli Sequence 19, Appli Sequence 1776, Appli Sequence 1775, Appli Sequence 1775, Appli Sequence 1775, Appli Sequence 221, Appli Sequence 24, Appli Sequence 25, Appli Sequence 27, Appli Sequence 4, Appli Sequence 57, Appli Sequence 57, Appli Sequence 52, Appli Sequence 52, Appli Sequence 52, Appli Sequence 52, Appli Sequence 52, Appli Sequence 52, Appli Sequence 52, Appli Sequence 52, Appli Sequence 52, Appli Sequence 52, Appli Sequence 27, Appli Sequence 27, Appli Sequence 27, Appli Sequence 27, Appli Sequence 27, Appli Sequence 27, Appli Sequence 27, Appli Sequence 27, Appli Sequence 27, Appli Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequence 213, App Sequenc
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Appli

RESULT 2
US-10-067-443-2
; Sequence 2, Application US/10067443
; Patent No. 6642041
; GENERAL INFORMATION:
; APPLICANT: Bristol-Myers Squibb Company

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Matches 239 y 1 y 61 b 89 b 1121 y 121 y 121 y 121 y 121 y 120	RESULT 1  US-10-067-443-22  US-10-067-443-22  ; Sequence 22, Application US/10  ; Patent No. 6642041  ; GENERAL INFORMATION:  APPLICANT: Bristol-Myers Squi-  TITLE OF INVENTION: POLYNUCLE:  TITLE OF INVENTION: POLYNUCLE:  TITLE OF INVENTION: POLYNUCLE:  CURRENT APPLICATION NUMBER: US  PRIOR APPLICATION NUMBER: US  PRIOR APPLICATION NUMBER: US  PRIOR FILING DATE: 2001-02-05  PRIOR PPLICATION NUMBER: US  PRIOR FILING DATE: 2001-04-10  NUMBER OF SEQ ID NOS: 71  SOFTWARE: PATENTIN OF SEQ ID NOS: 71  SEQ ID NO 22  LENGTH: 267  TYPE: PRT  ORGANISM: homo sapiens  US-10-067-443-22  Query Match	<b>233333333344444901233333~89012345</b>	28
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FILE REFERENCE: D0073 NP
CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOFTWARE: Patentin version 3.0
SEQ ID NO 19
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; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-067-443-2
                                                                                                                                                                                                                             ; ORGANISM: homo sapiens 
US-10-067-443-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED TITLE OF INVENTION: SPINAL CORD, MP-1
FILE REFERENCE: D0073 NP
CURRENT APPLICATION NUMBER: US/10/667,443
CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR PILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOFTWARE: Patentin version 3.0
LEGISTAL ALA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 19, Application US/10067443
Patent No. 6642041
GENERAL INFORMATION:
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Best Local Similarity
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Best Local Similarity
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TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED
TITLE OF INVENTION: SPINAL CORD, MP-1
                                                                                                                                                                                                                                                             LENGTH: 439
TYPE: PRT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     239;
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                       61 HFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGI------
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 HFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIFLISKVEQINIPGLCLKIAAHF
                                                                         LLALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKQGNRF
                                                                                                LLALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKQGNRF
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                                                                                                                                                   Conservative
                                                                                                                                                                    97.9%;
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                                                                                                                                                                    Score 1213.5; DB 4
Pred. No. 2.3e-141;
                                                                                                                                                   Mismatches
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US-10-067-443-3
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US-09-540-236-2726
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Best Local Similarity 33.6
82; Conservative
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APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED
TITLE OF INVENTION: SPINAL CORD, MP-1

FILE REFERENCE: D0073 NP
CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2002-02-05
Sequence 2726, Application US/09540236
Patent No. 6673910
GENERAL INFORMATION:
APPLICANT: Gary L. Breton et al.
APPLICANT: GARY L. Breton et al.
APPLICANT: GARY L. BY SET OF AND AMINO ACID SEQUENCES TITLE OF INVENTION: FOR DIAGNOSTICS AND THERAPEUTICS FILE REFERENCE: 2709-2005-001
CURRENT APPLICATION NUMBER: US/09/540,236
CURRENT FILING DATE: 2000-04-04
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SOFTWARE: PatentIn version 3.0
SEQ ID NO 3
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PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
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                                                                                                                                                                                                                                                                                                                                             225 VGEA 228
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RESULT 7
US-09-543-681A-6513
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CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-02-18
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 17372
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GENERAL INFORMATION:
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LENGTH: 350
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TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: PRT
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                                                                                                                                                       182 TDNGIMIAWNGIERLRAGLGILHDIEGIRYEPKCPL 217
                                                                                                                                                                                                                         311 LLIKCRRAL---KQTGL--KN---LVIAGGVSANQALRSGLEKMLGEMKGQVFYARPRFC
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                                                                                                                            TDNGAMIAYAGCQRLLAG---QHDGPAISVQPRWPM 395
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RESULT 8
US-08-087-797-3
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APPLICANT: Mellors, A
APPLICANT: Lo, Reggie
APPLICANT: Abdullah,
TITLE OF INVENTION: P
TITLE OF INVENTION: G
TITLE OF INVENTION: G
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS: 8344
SEQ ID NO 6513
LENGTH: 357
TYPE: PRT
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GENERAL INFORMATION:
APPLICANT: GARY BRETON
                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/087,797
FILING DATE: 14-JUL-1993
CLASSIFICATION: 435
ATTORNEY/ACENT INFORMATION:
NUMBER: TITE TO THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF TH
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TITLE OF INVENTION: DIACNOSTICS AND THERAPEUTICS
FILE REFERENCE: 2709.1002-001
CURRENT APPLICATION NUMBER: US/09/543,681A
CURRENT FILING DATE: 2000-04-05
PRIOR APPLICATION NUMBER: US 60/128,706
PRIOR APPLICATION NUMBER: US 60/128,706
PRIOR FILING DATE: 1999-04-09
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NAME: Layton, Jr., Samuel G
REGISTRATION NUMBER: 22807
REFERENCE/DOCKET NUMBER: 33
TELECOMMUNICATION INFORMATION:
TELEPHONE: 704 377 1561
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CORRESPONDENCE ADDRESS:
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STATE: No. 5543312th Carolina
"mited States
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Local Similarity 30.3%;
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Lo, Reggie Y.C.
Abdullah, Khalid M.
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Pred. No. 2.4e-17;
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; TYPE: amino acid
; STRANDEDNESS: Single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-08-087-797-3
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TYPE: PRT
; ORGANISM: Klebsiella pneumoniae
US-09-489-039A-9221
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RESULT 10
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PRIOR FILING DATE: 1999-01-29
NUMBER OF SEQ ID NOS: 14342
SEQ ID NO 9221
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                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                        Matches
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TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING
TITLE OF INVENTION: PNEUMONIAE FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 2709.2004001
CURRENT APPLICATION NUMBER: US/09/489,039A
CURRENT FILING DATE: 2000-01-27
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les 67; Conserv
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                                                                                                                                                                        122 LVKRTHRAILFCKQRDLLPQNN-AVLVASGGVASNFYIRRALEILTNATQCTLLCPPPRL 180
                                                        304
                                                                                                                                 253 LMIKCRRA-----LEQTGFKRLVMAGGVSANRTLRAKLAEMMQKRGGEVFYARPEF
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                                                                                                                                                                                                                                                                                           148 LISVTGIGQYELLGESIDDAAGEAFDKTAKLLGL-DYP-----GGPMLSKMASQGTEGR 200
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                                                                                             CTDNGIMIAWNGIERLRAGLGILHDIE-GIRYEPKCPL 217
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                                                                                                                                                                                                                                                   FDIKPPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQHTMACH
                                                        CTDNGAMIAYAGMVRLQTGA----KAELGVTVRPRWPL 337
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                                                                                                                                                                                                                                                                                                                                                                                           16.5%; Score 205; DB 4; Length 343; 30.3%; Pred. No. 1.7e-16;
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US-10-067-443-4

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US-10-067-443-28
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                                                                                    ; ORGANISM: Caenorhabditis elegans US-10-067-443-28
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APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED
TITLE OF INVENTION: SPINAL CORD, MP-1
FILE REFERENCE: D0073 NP
CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2002-02-05
CURRENT FILING DATE: 2002-02-05
                                                                                                                                                                PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOFTWARE: Patentin version 3.0
SEQ ID NO 28
                                                                                                                                                                                                                                                                                                                                                                     Sequence 28, Application US/10067443
Patent No. 6642041
GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED
TITLE OF INVENTION: SPINAL CORD, MP-1
FILE REFERENCE: D0073 NP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 4, Application US/10067443 Patent No. 6642041
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Best Local Similarity
Matches
                Best Local Similarity
                                         Query Match
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SOFTWARE: PatentIn version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: US 60/282,814 PRIOR FILING DATE: 2001-04-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: PRT ORGANISM: Caenorhabditis elegans
                                                                                                                              LENGTH: 421
TYPE: PRT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         178 PRICTDNGIMIAWNGIERLRAGIGILHDIEGIRYEP------KCPIGVDISKEVG 226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       275 VARHISSKLHIFFESLSEQEKLPKQ---LVIGGGVAANQYIFGAISKLSAAHNVTTIKVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                118 MACHLVKRTHRAILFCKQRDLLPQNNAVLVASGGVASNFYIRRALEILTNATQCTLLCPP 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   163 LISVAEDVEKFKLYGOSVSGSPGECIDKVARQLGDL-GSEFDGIHVGAAVEILASRASAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  227 EASIKVPQLKM 237
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     59 -RFHFDIKPPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQHT 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          69;
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69;
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Conservative
16.2%; Score 201.5; DB 4;
27.5%; Pred. No. 6.3e-16;
Mismatches 99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16.2%; Score 201.5; DB 4; 27.5%; Pred. No. 6.3e-16;
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                                         DB 4;
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                                                                                                                     Matches
                                                                                                                                       Query Match
Best Local Similarity
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GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER: 33
TELECOMMUNICATION INFORMATION:
TELEPHONE: 704 377 1561
                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION: NAME: Layton, Jr., Samue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOPTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: Pasteurella Haritle OF INVENTION: Glycoprotease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Layton, Jr., Samuel G. REGISTRATION NUMBER: 22807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 14
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STREET:
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                                      142 LVKVDGVGQYELLGESIDDAAGEAFDKTGKLLGL-DYP-----AGVAMSKLAESGTPNR 194
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2, Application US/08087797
5. 5543312
62 FDIKPPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQHTMACH 121
                                                                            2 LALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKQGNRFH
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No. 5543312th Carolina
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1211 East Morehead Street,
                                                                                                                                                                                                                                                                                                                                       704 334 2014
                                                                                                                     Conservative
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Abdullah, Khalid M.
VENTION: Pasteurella Haemolytica
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             United States
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mellors, Alan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14-JUL-1993
                                                                                                                                     16.1%; Score 200; DB 1; Length 325; 31.6%; Pred. No. 6.5e-16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US/08/087,797
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                                                                                                                   Mismatches
                                                                                                                   Indels
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US-09-107-532A-6609
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Patent No. 6583375
GENERAL INFORMATION:
APPLICANT: Lynn A Doucette-Stamm
TITLE OF INVENTION: NUCLEIC ACID
                                                                                                                                            Matches
                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION FOR SEQ ID NO: 6609:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OPERATING SYSTEM: <UNKNOWN>
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/107,532A
FILLING DATE: 30-Jun-1998
PRIOR APPLICATION NUMBER: 60/085,598
APPLICATION NUMBER: 60/085,598
FILLING DATE: 14 May 1998
APPLICATION NUMBER: 60/051571
FILLING DATE: July 2, 1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                          NAME/KEY: misc_feature
LOCATION: (B) LOCATION 1...363
SEQUENCE DESCRIPTION: SEQ ID NO: 6609:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Ariniello, Pamela Deneke
REGISTRATION NUMBER: 40,489
REFERENCE/DOCKET NUMBER: GTC-012
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                  ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE: protein HYPOTHETICAL: YES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM: MEDIUM TYPE: CD/RO
                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                              169
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          249 ----VDTILIKCK-RALEQTGYKRLVMAGGVSANKQLRADLAEMMKKLKGEVFYPRPQFC 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                122 LVKRTHRAILFCKQRDLLPQNNAVLVASGGVASNFYIRRALEILTNATQCTLLCPPPRLC 181
61 HFDIKPPLHHAKNCDFSFTGLQHVTDKIIMK-KEKEEGIEKGQILSSAADIAATVQHTMA 119
                                                                                                                                       63;
                                                                                                2 LALVOGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKOG-NRF 60
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                                                              ĹVYMÓEDGSYBIIGETRÓDÁAGEAYDKVGRVLGL-
                                                                                                                                                                                                                                                                                                                             ORGANISM: Enterococcus faecium
                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 363 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEPHONE: (781)893-5007
TELEFAX: (781)893-8277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STATE: Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET: 100 Beaver Street CITY: Waltham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZIP: 02354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: GENOME THERAPEUTICS CORPORATION
                                                                                                                                            Conservative
                                                                                                                                                            15.9%;
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                                                                                                                                       34;
                                                                                                                                         Score 197; DB 4;
Pred. No. 1.8e-15;
4; Mismatches 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and David Bush
AND AMINO ACID SEQUENCES RELATING TO
PAECIUM FOR DIAGNOSTICS AND THERAPEUTICS
                                                              ----SYPSGKEIDQLAHQGKDNY
                                                                                                                                                                               Length 363;
                                                                                                                                            Indels
                                                                                                                                            32;
                                                                                                                                         Gaps
                                                              221
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FILE REFERENCE: D0073 NP
CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOFTWARE: Patentin version 3.0
SEQ ID NO 5
                                                                                                                                                                                                                                                                                                               RESULT 15
US-08-987-121A-4
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US-10-067-443-5
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TYPE: PRT
CORGANIZM: Thermotoga maritima
US-10-067-443-5
                                                                     Sequence 4, Application US/08987121A
GENERAL INFORMATION:
APPLICANT: Hoskins, Jo Ann
APPLICANT: Tang, Joseph Chiou-Chung
APPLICANT: Treadway, Patti Jean
TITLE OF INVENTION: Streptococcus Pneumoniae Gene Sequence
TITLE OF INVENTION: GCP
NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
ADDRESSEE: Eli Lilly and Company
STREET: Lilly Corporate Center
CITY: Indianapolis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 5, Application US/10067443 Patent No. 6642041 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
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TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED
TITLE OF INVENTION: SPINAL CORD, MP-1
COMPUTER READABLE FORM:
                                                             STATE:
                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         204 SYNFSFAGLK---TSVLYFLQREKGYK-----VEDVAASFQKAVVDILVEKTFR----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             73 NCDFSFTGLQHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQHTMACHLVKRTHRAILF 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            h 15.6%; Score 193.5; DB 4;
Similarity 28.9%; Pred. No. 4.2e-15;
55; Conservative 38; Mismatches 68;
                    46285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CKQRDLLPQNNAV--LVASGGVASNFYIRRALEILTNATQCTLLCPPPRLCTDNGIMIAW 190
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                                                         Indiana
                                    U.S.
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Best Local S
Matches 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDIUM TYPE: Floppy disk
COMPUTER: ISM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/987,121A
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 336 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: Webster, Thomas D.
REGISTRATION NUMBER: 39,872
REFERENCE/DOCKET NUMBER: X-
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                             / Match 15.3%; Score 190; DB 3; Local Similarity 31.1%; Pred. No. 1.2e-14; les 61; Conservative 32; Mismatches 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION:
                                                                                                                                                                                                                                                            144 LVYVSEAGDYKIVGETRDDAVGEAYDKVGRVMGL-----TYPAGREIDELAHQGHDI- 195
300 GDNAGMIAYASVSEWN 315
                                                                                                                                                                         196 YDFPRAMIKEDNLEFSFSGLKSAFINLHHNAE-----QKGESLST-EDLCASFQAAVMDI 249
                                          182 TDNGIMIA----WN
                                                                                     250 LMAKTKKAL-----EKYPVK--TLVVAGGVAANKGLRERL--ATEITDVNVIIPPLRLC
                                                                                                                         122 LVKRTHRAILFCKQRDLLPQNNAVLVASGGVASNFYIRRALEILTNATQCTLLCPPPRLC 181
                                                                                                                                                                                                               62 FDIKPPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQHTMACH 121
                                                                                                                                                                                                                                                                                              2 LALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKQGNRFH 61
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Search completed: November 10, 2005, 16:54:35 Job time: 20.2239 secs

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Minimum
Maximum
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence:
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seq length: 2000000000
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Published Applications AA:*

1: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*

2: /cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*

3: /cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*

4: /cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*

5: /cgn2_6/ptodata/1/pubpaa/US08_NEW_PUB.pep:*

6: /cgn2_6/ptodata/1/pubpaa/US08_NEW_PUB.pep:*

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19: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*

20: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*

21: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*

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26: /cgn2_6/ptodata/1/pubpaa/US10B_PUB.pep:*

27: /cgn2_6/ptodata/1/pubpaa/US10B_PUB.pep:*
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1240
             November 10, 2005, 16:43:58; Search time 63.1272 Seconds (without alignments) 1584.102 Million cell updates/sec
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
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Copyright (c) 1993 - 2005 Compugen Ltd
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

### SUMMARIES

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	US-10-012-140-5	14	414	97.0	1203	11
Sequence 19, Appl	US-10-651-722-19	15	439	97.9	1213.5	10
Sequence 19, Appl	US-10-649-273-19	15	439	97.9	1213.5	ø
	VS-10-067-443-19	#.	4:09	. 97.9	1213.5	(O
Sequence 8, Appli	US-10-480-988-8	17	414	100.0	1240	7
Sequence 2, Appli	US-10-651-722-2	15	414	100.0	1240	σ
Sequence 2, Appli	US-10-649-273-2	15	414	100.0	1240	v
Sequence 2, Appli	US-10-067-443-2	14	414	100.0	1240	4
•	US-10-651-722-22	15	267	100.0	1240	w
Sequence 22, Appl	US-10-649-273-22	15	267	100.0	1240	2
Sequence 22, Appl	US-10-067-443-22	14	267	100.0	1240	_
Description	ID	:	Length	Query Match Length DB	Score	No.

<u>4</u> .	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12
201.5	201.5	206	206	206	207	207.5	208	210	211	212	213	213	213.5	224	224	228.5	229	231	231	231	239	241	247	248.5	254	257	270	326	326	326	332.5	337	960
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421	421	396	337	337	441	341	335	337	41	340	337	337	347	342	342	347	341	341	341	341	251	343	312	348	333	382	444	463	463	463	409	445	364
14	14	15	15	9	16	15	15	15	14	15	15	9	20	15	9	14	18	18	15	9	14	15	15	15	14	15	16	15	15	14	20	15	15
US-10-067-443-28	US-10-067-443-4	US-10-425-114-67198	US-10-282-122A-56695	US-09-815-242-10304	US-10-437-963-111620	-10-282-122A-	tn	US-10-282-122A-78161	US-10-012-140-26	US-10-282-122A-68438	US-10-282-122A-75485	US-09-815-242-13780	012	US-10-282-122A-58204	US-09-815-242-11043	US-10-012-140-24	US-10-958-216-52	US-10-958-216-50	σ	US-09-815-242-11798	US-10-081-051-9	10-282-	-10-282-122A-4449	-10-282	-10	-10-282-122A-5085	-10-437-963-	-10-651-722-	-10-649-273	-10-067-	US-11-097-143-34191	US-10-424-599-209259	US-10-094-749-2039
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### ALIGNMENTS

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US-10-67-443-22

Sequence 22, Application US/10067443
Publication No. US20030082782A1

GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED 1
TITLE OF INVENTION: SPINAL CORD, MP-1

FILE REFERENCE: DO073 NP
CURRENT APPLICATION NUMBER: US/10/067,443

CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR PILING DATE: 2001-02-05
PRIOR PILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOPTWARE: PATENTIN Version 3.0
SEQ ID NO 22
LENGTH: 267
TYPE: PRT
ORGANISM: homo sapiens
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                                                                                                                                                                                                    Query Match 100.0%; Score 1240; DB 14; Length 267; Best Local Similarity 100.0%; Pred. No. 2.3e-127; Matches 239; Conservative 0; Mismatches 0; Indels 0;
                            61 HFDIKPPLHHAKHCDFSPTGLQHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQHTMAC
  68
                                                                                                    29 LLALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIKHLAKQGNEF
                                                                                                                           1 LLALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKQGVRF
HPDIKPPLHHAKNCDPSPTGLQHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQHTMAC
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RESULT 2
US-10-649-273-22
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                 CURRENT APPLICATION NUMBER: US/10/651,722
CURRENT FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 10/067,443
PRIOR APPLICATION NUMBER: US 10/067,443
PRIOR FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
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LENGTH: 267
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TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE,
FILE REPERENCE: D0073 CNT
CURRENT APPLICATION NUMBER: US/10/649,273
CURRENT FILING DATE: 2003-08-27
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 10/067,443
PRIOR PILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 0/282,814
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER: OS 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ. ID NOS: 71
NUMBER OF SEQ. ID NOS: 71
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TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE, MP-1
FILE REFERENCE: D0073 DIV
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ORGANISM: homo sapiens
-10-649-273-22
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PatentIn version 3.2
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RESULT 4
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Publication No. US20030082782A1

GENERAL INFORMATION:

APPLICANT: Bristcol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED
TITLE OF INVENTION: SPINAL CORD, MP-1

FILE REFERENCE: D0073 NP
CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2001-02-05

PRIOR APPLICATION UNMBER: US 60/266,518

PRIOR FILING DATE: 2001-02-05

PRIOR APPLICATION UNMBER: US 60/263,814

PRIOR APPLICATION NUMBER: US 60/282,814

PRIOR FILING DATE: 2001-04-10

NUMBER OF SEQ ID NOS: 71

SOFTWARE: Patentin version 3.0
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LENGTH: 267
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ORGANISM: Homo sapiens
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121 HLVKRTHRAILFCKQRDLLÞQNNAVLVASGGVASNFYIRRALEILTNATQCTLLCÞÞÞRL 180
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RESULT 5 US-10-649-273-2

Sequence 2, Publication

2, Application US/10649273 ton No. US20040043407A1

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CURRENT APPLICATION NUMBER: US/10/651,722
CURRENT FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 10/067,443
PRIOR APPLICATION NUMBER: US 10/067,443
PRIOR FILING DATE: 2002-02-05
PRIOR PILING DATE: 2001-04-10
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
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US-10-651-722-2
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CURRENT PILING DATE: 2003-08-27
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 10/067,443
PRIOR FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOFTWARE: Patentin version 3.2
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                                                                                                      Query Match
Best Local S
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TYPE: PRT
ORGANISM: Homo sapiens
-10-651-722-2
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SEQ ID NO 2
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APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLECTIDE ENCODING A NOVEL METALOPROTEASE,
FILE REFERENCE: D0073 CNT
                                                                                  Matches
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TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE, MP-1
FILE REFERENCE: D0073 DIV
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1 LLALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTWSGGKAIEHLAKQGNRF 60
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                                                                             100.0%; Score 1240; DB 15; larity 100.0%; Pred. No. 4.3e-127; Conservative Ü; Mismatches Ü;
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APPLICANT: LEE, Soo Yeun; TRÂN, Uyen K.;

APPLICANT: SPRAGUE, William W.; TANG, Y. Tom;

APPLICANT: SPRAGUE, William W.; TANG, Y. Tom;

APPLICANT: LU, Yan; ZEBARDADIAN, Yeganeh

TITLE OF INVENTION: PROTEIN MODIFICATION AND MAINTENANCE MOLECULES

FILE REFERENCE: PF-1040 USK

CURRENT APPLICATION NUMBER: US/10/480,988

CURRENT FILING DATE: 2003-12-16

PRIOR APPLICATION NUMBER: PCT/US02/19360

PRIOR APPLICATION NUMBER: US 60/300,508

PRIOR FILING DATE: 2001-06-22

PRIOR APPLICATION NUMBER: US 60/303,445

PRIOR APPLICATION NUMBER: US 60/303,445

PRIOR APPLICATION NUMBER: US 60/305,405

PRIOR APPLICATION NUMBER: US 60/305,405

PRIOR APPLICATION NUMBER: US 60/305,405

PRIOR APPLICATION NUMBER: US 60/305,405

PRIOR FILING DATE: 2001-07-13

PRIOR FILING DATE: 2001-07-13
                                                                                               ; FEATURE:
; NAME/KEY: misc_feature
; OTHER INFORMATION: Incyte ID No: 7632424CD1
US-10-480-988-8
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US-10-480-988-8
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SEQ ID NO 8
LENGTH: 414
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Publication No. US20050069877A1
GENERAL INFORMATION:
APPLICANT: GANDHI, Ameena R.; KABLI
Query Match
Best Local Similarity
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APPLICANT:
APPLICANT:
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APPLICANT:
APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: US 60/315,992
PRIOR FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: US 60/378,205
PRIOR FILING DATE: 2002-05-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR FILING DATE: 2001-08-09
PRIOR APPLICATION NUMBER: US 60/314,821
PRIOR FILING DATE: 2001-08-24
                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS: 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: US 60/311,442
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                                                                                                                                                                                                                 ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                  TYPE: PRT
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HONCHELL, CYNTLIA D.; NGUYEN, Danniel B
LU, Dyung Aina M.; LEE, Ernestine A.;
YUE, Henry; PORSYTHE, Ian J.;
YUE, Henry; PORSYTHE, Ian J.;
BARROSO, Ines; RAMKUMAR, Jayalaxmi;
GRAFFIN, Jennifer A.; LI, Joana X.;
GRAFFIN, Jennifer A.; LI, Joana X.;
YANG, Junming; THANGAVELU, Kavitha;
GRIFTZEN, Kimberly J.; DING, Li;
BAUGHN, Mariah R.; BOROWSKY, Mark L.;
YAO, Monique G.; CHAWLA, Narinder K.;
YAO, Monique G.; CHAWLA, Narinder K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SWARNAKAR, Anita; HAFALIA, April J.A.; TRAN, Bao; DUGGAN, Brendan M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MASON, Patricia M.; GURURAJAN, Rajagopal;
LEE, Sally; BECHA, Shanya D.;
LEE, SO Yeun; TRAN, Uyen K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ameena R.; KABLE, Amy E.;
        100.0%; Score 1240; DB 17; 100.0%; Pred. No. 4.3e-127;
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/EN, Danniel B.;
                                      Length 414;
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Matches 239;

Conservative

Mismatches

0

Gaps

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RESULT 9
US-10-649-273-19
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SEQ ID NO 19
LENGTH: 439
TYPE: PRT
ORGANISM: homo sapiens
US-10-067-443-19
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US-10-067-443-19
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APPLICANT: Bristol-Myers Squibb Company
APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED
TITLE OF INVENTION: SPINAL CORD, MP-1
FILE REFERENCE: DO073 NP
CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT APPLICATION NUMBER: US/00/266,518
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
NUMBER OF SEQ ID NOS: 71
GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE, MP-1
                                                           Sequence 19, Application US/10649273 Publication No. US20040043407A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 19, Application US/10067443
Publication No. US20030082782A1
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Local Similarity 90.2%;
nes 238; Conservative
                                                                                                                                                                           416
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                                                                                                                                                                                              PLGVDISKEVGEASIKVPQLKMEI 239
                                                                                                                                                                                                                                                                                                                                                                                                                       CTDNGIMIAWNGIERLRAGLGILHDIEGIRYEPKCPLGVDISKEVGEASIKVPQLKMEI
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                                                                                                                                                                         PLGVDISKEVGEASIKVPQLKMEI 439
                                                                                                                                                                                                                                                FYIRRALEILTNATOCTLLCPPPRLCTDNGIMIAWNGIERLRGGLGILHDIEGIRYEPKC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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FILE REFERENCE: D0073 CNT
CURRENT APPLICATION NUMBER: US/10/649,273
CURRENT FILING DATE: 2003-08-27
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR APPLICATION NUMBER: US 10/067,443
PRIOR APPLICATION NUMBER: US 10/067,443
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOFTWARE: Patentin version 3.2
SEQ ID NO 19
                                                                                                                                                                                                             PRIOR PILLING DATE: 2001-02-05
PRIOR PILLING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 10/067,443
PRIOR FILLING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOFTWARE: PATENTIN VERSION 3.2
SEQ ID NO 19
LENGTH: 439
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US-10-651-722-19
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                                                                                                                                                            US-10-651-722-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 19, Application US/10651722 Publication No. US20040048302A1 GENERAL INFORMATION:
                                                                                            Query Match
Best Local
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Best Local Similarity 90.2%;
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                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE, MP-1
FILE REFERENCE: D0073 DIV
CURRENT APPLICATION NUMBER: US/10/651,722
CURRENT FILING DATE: 2003-08-29
                                                                                                                                                                                               LENGTH: 43
TYPE: PRT
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                                                                                                                                                                             ORGANISM: homo sapiens
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                                                                                              Local Similarity
156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 176 LLALVQGVSDFLLLGKSLDTAFGDMLDKVARRLSLTKHPECSTMSGGKATEHLAKQGNRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 296 CRYEKGQILSSAADIAATVQHTMACHLVKRTHRAILFCKQRDLLPQNNAVLVASGGVASN
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                                                                              Conservative
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                                                                                                97.9%;
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                                                                            Score 1213.5; DB 15;
Pred. No. 3.9e-124;
0; Mismatches 1; I
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APPLICANT: Leiby, Kevin R.

APPLICANT: Kapeller-Libermann, Rosana

APPLICANT: Glucksmann, Maria A.

TITLE OF INVENTION: 13859, 28472, 5495, 65507, 81588, AND

TITLE OF INVENTION: 14354 METHODS AND COMPOSITIONS OF HUMAN PROTEINS AND

TITLE OF INVENTION: THEREOF

FILE REFERENCE: 381552004900

CURRENT APPLICATION NUMBER: US/10/012,140

CURRENT FILING DATE: 2001-11-08

PRIOR APPLICATION NUMBER: 60/246,768

PRIOR APPLICATION NUMBER: 60/246,772

PRIOR APPLICATION NUMBER: 60/246,772

PRIOR APPLICATION NUMBER: 60/246,772

PRIOR APPLICATION NUMBER: 60/246,772

PRIOR FILING DATE: 2000-11-08

PRIOR APPLICATION NUMBER: 60/249,185

PRIOR FILING DATE: 2000-11-15

NUMBER OF SEQ ID NOS: 49

SOFTMARE: FastSEQ for Windows Version 4.0
                                                         RESULT 12
US-10-094-749-2039
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US-10-012-140-5
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; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-012-140-5
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Sequence 2039, Application US/10094749 Publication No. US20030219741A1 GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 232;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 5, Application US/10012140 Publication No. US20030009017A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Match 97.0%;
Local Similarity 97.1%;
                                                                                                                                                              181 CTDNGIMIAWNGIERLRAGLGILHDIEGIRYEPKCPLGVDISKEVGEASIKVPQLKMEI 239
                                                                                                                                                                                                                          296
                                                                                                                                                                                                                                          121 HLVKRTHRAILFCKQRDLLPQNNAVLVASGGVASNFYIRRALEILTNATQCTLLCPPPRL
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                                                                                                                                                                                                                                                                                                                                                                                  176 LLALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKQGNRF
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                                                                                                                                       CTDNGIMIAWNGIERLRAGLGILHDIEGIRYEPKCPLGVDISKEVGEASIKVPQLKMEI
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Pred. No. 5.1e-123;
7. Mismatches 4;
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CURRENT APPLICATION NUMBER: US/10/094,749
CURRENT FILING DATE: 2002-03-12
PRIOR APPLICATION NUMBER: 60/350,435
PRIOR FILING DATE: 2002-01-24
PRIOR PELINGTON NUMBER: JP 2001-328381
PRIOR FILING DATE: 2001-09-14
NUMBER OF SEQ ID NOS: 3381
SOPTWARE: PATENTIN Ver. 2.1
SEQ ID NO 2039
LENGTH: 364
TYPE: PRT
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                                                 APPLICANT: Zhou Yihua
APPLICANT: Zhou Yihua
APPLICANT: Cao Yongwei
TITLE OF INVENTION: Soy Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21(5322))B
CURRENT APPLICATION NUMBER: US/10/424,599
CURRENT PILING DATE: 2003-44-28
                                                                                                                                                                                                                                                                                           US-10-424-599-209259
                                                                                                                                                                                                                                                                                                              RESULT 13
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                               NUMBER OF SEQ ID NOS: 285684
SEQ ID NO 209259
LENGTH: 445
                                                                                                                                                                                                                                       Sequence 209259, Application US/10424599 Publication No. US20040031072A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 77.4%;
Best Local Similarity 98.4%;
Matches 186; Conservative
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APPLICANT:
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APPLICANT: Kovalic David K
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TITLE OF INVENTION: NOVEL FULL-LENGTH CDNA
FILE REFERENCE: 084335/0160
ORGANISM: Glycine max
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NAGAI, KEIICHI
IRIE, RYOTARO
TAMECHIKA, ICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTSUKI, TETSUJI
WAKAMATSU, AI
SATO, HIROYUKI
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YAMAMOTO,
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YOSHIKAWA, TSUTOMU
OTSUKA, MOTOYUKI
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Pred. No. 2.2e-96;
0; Mismatches 3;
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APPLICANT: Venter, J. Craig
APPLICANT: Venter, J. Craig
APPLICANT: Venter, J. Craig
APPLICANT: Venter, J. Craig
APPLICANT: Venter, Such AS NUC
TITLE OF INVENTION: ARRAYS, FOR DETECTING EXX
TITLE OF INVENTION: DROSOPHILA GENES.
FILE REFERENCE: CLOOO728
FILE REFERENCE: CLOOO728
CURRENT FILING DATE: 2005-04-04
PRIOR APPLICATION NUMBER: 60/160,191
PRIOR APPLICATION NUMBER: 60/160,191
PRIOR APPLICATION NUMBER: 60/161,932
PRIOR FILING DATE: 1999-10-19
PRIOR FILING DATE: 1999-10-28
PRIOR APPLICATION NUMBER: 60/164,769
PRIOR APPLICATION NUMBER: 60/173,383
PRIOR APPLICATION NUMBER: 60/173,383
PRIOR APPLICATION NUMBER: 60/173,383
PRIOR APPLICATION NUMBER: 60/173,383
PRIOR APPLICATION NUMBER: 60/173,383
PRIOR APPLICATION NUMBER: 60/173,383
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; OTHER INFORMATION: Clone ID: PAT_MRT3847_3098C.1.pep
US-10-424-599-209259
                                                                                                                                                                                                                                                                                                                                      ; ORGANISM: DROSOPHILA US-11-097-143-34191
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NUMBER OF SEQ ID NOS: 43008
SOFTWARE: FastSEQ for Windows Version
SEQ ID NO 34191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 34191, Application US/11097143
Publication No. US20050208558A1
GENERAL INFORMATION:
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Best Local
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                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 409
TYPE: PRT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/175,693
FILING DATE: 2000-01-12
APPLICATION NUMBER: 60/184,831
FILING DATE: 2000-02-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/191,637
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        308 RIAVLHLEERCERAIQWALKMEPSIRH---LVVSGGVASNQYVRARLDMVVKKNGLQLVC 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        116 HTMACHLVKRTHRAILFCKQRDLLPQNNAVLVASGGVASNFYIRRALBILTNATQCTLLC 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 HFDIKPPLHHAKNCDFSFTGLQ-----HVTDKIIMKKEKEEGIEKGQILSSAADIAATVQ 115
                                                                     61 HPDIKPPLHHAKNCDFSFTGLQHVTDKIIMKKEKEEGIEKGQILSSAADIAATVQHTMAC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 LLALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAKQGNRF
                                                                                                                                                     2 LALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECSTMSGGKAIEHLAK-QGNRF
                                                                                                                                                                                                                                                              Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PPPRICTDNGVMIAWTGIEHFRMG-----RYDPPPP 395
                                                                                                                             LVVANGPGRLTLIGQTLDDAPGEAFDKIGRRLRLHILPEYRLWNGGRAIEHAAQLASDPL
                          AYEFPLPLAQQRNCNFSFAGIKNNSFRAIRARERAERTPPDGVISNYGDFCAGLLRSVSR
                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                        26.8%; Score 332.5; DB 20; Length 409; 35.9%; Pred. No. 2.5e-27;
                                                                                                                                                                                                                              38;
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EXPRESSION OF 10,000 OR MORE
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CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOFTWARE: PatentIn version 3.0
SEQ ID NO 3
LENGTH: 463
LENGTH: 463
TYPE: PRT
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Search completed: November 10, 2005, 16:58:52 Job time : 64.1272 secs
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Publication No. US20030082782A1
GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING
TITLE OF INVENTION: SPINAL CORD, MP-1
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-Q=/cgn2_1/USPTO_spool_p/US10649273/runat_02112005_091338_15550/app_query.fasta_1.1429
-Q=/cgn2_1/USPTO_spool_p/US10649273/runat_02112005_091338_15550/app_query.fasta_1.1429
-Q=/cgn2_1/USPTO_spool_p/US10649273/runat_02112005_091338_15550/app_query.fasta_1.1429
-Q=/cgn2_1/USPTO_spool_p/USI0649273_000000000
-THR_MINES_CORE=D=1 -MAX=100 -THR_MINES_0 -ALIGN=15 -MODE=LOCAL_0UTFNT=pto -NORM-ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=2000000000
-USER=US10649273_0CGN_1_1_7742_prunat_02112005_091338_15550 -NCPU=6 -ICPU=3
-NO_MMAD_-LARGEQUERY_-NEG_SCORES=0 -WAIT_-DSPBLOCK=100 -LONGLOG_-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
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## ALIGNMENTS

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RESULT 2
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Sequence 23
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Chen, J., Feder, J.N., Nelson, T.C., Krystek, S.R. and
Polynucleorides encoding a novel metalloprotease, N
Patent: US 6642041-A 23 04-NOV-2003;
Location/Qualifiers
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 1908)

Strausberg,R.L., Feingold,E.A., Grouse,L.H., Derge,J.G., Klausner,R.D., Collins,F.S., Wagner,L., Shenmen,C.M., Schuler,G.D Altschul,S.F., Zeeberg,B., Buetow,K.H., Schaefer,C.F., Bhat,N.K.,
                                                                         Homo
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CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: National Institutes of Health Intramural

Sequencing Center (NISC),

Gaithersburg, Maryland;

Web site: http://www.nisc.nih.gov/

Contact: nisc.mgc@nhgri.nih.gov

Akhter,N., Ayele,K., Beckstrom-Sternberg,S.M., Benjamin,B.,

Blakesley,R.W., Bouffard,G.G., Breen,K., Brinkley,C., Brooks,S.,

Dietrich,N.L., Granite,S., Guan,X., Gupta,J., Haghighi,P.,

Hansen,N., Ho,S.-L., Karlins,E., Kwong,P., Laric,P., Legaspi,R.,

Maduro,Q.L., Masiello,C., Maskeri,B., Mastrian,S.D., McCloskey,J.C.,

McDowell,J., Pearson,R., Stantripop,S., Thomas,P.J., Touchman,J.W.,

Tsurgeon,C., Vogt,J.L., Walker,M.A., Wetherby,K.D., Wiggins,L.,

Young,A., Zhang,L.-H. and Green,E.D.
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Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
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Location/Qualifiers
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Direct Submission
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On Dec 19, 2003 this sequence version replaced gi:15080281.
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Chen, J., Feder, J.N., Nelson, T.C., Krystek, S.R. and Duclos, F.
Polynucleotides encoding a novel metalloprotease, MP-1
Patent: US 6642041-A 1 04-NOV-2003;
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IleSerLysGluValGlyGluAlaSerIleLysValProGlnLeuLysMetGluIle 239
                                        GlnAsnAsnAlaValLeuValAlaSerGlyGlyValAlaSerAsnPheTyrIleArgArg
                                                                                                                                                                                                                     HisLeuValLysArgThrHisArgAlaIleLeuPheCysLysGlnArgAspLeuLeuPro
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Chen,J., Feder,J.N., Nelson,T.C., Krystek,S.R. and Duclos,F.
Polynucleotides encoding a novel metalloprotease, MP-1
Patent: US 6642041-A 21 04-NOV-2003;
Location/Qualifiers
1. .1387
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                                     PheTyrIleArgArgAlaLeuGluIleLeuThrAsnAlaThrGlnCysThrLeuLeuCys
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ProProProArgLeuCysThrAspAsnGlyIleMetIleAlaTrpAsnGlyIleGluArg
                                                                                                   ArgAspLeuLeuProGlnAsnAsnAlaValLeuValAlaSerGlyGlyValAlaSerAsn
                                                                                                                                  CACACAATGGCATGTCATCTTGTGAAAAGAACACATCGGGCTATTCTGTTTTGTAAGCAG
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/mol_type="genomic"
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                                           US-10-649-273-2_COPY_176_414 (1-239)
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Submitted (27-OCT-2000) Chen J.M., MRC Molecular Enzymology

Submitted (27-OCT-2000) Chen J.M., MRC Molecular Enzymology

Submitted (27-OCT-2000) Chen J.M., MRC Molecular Enzymology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa;
Mammalia; Eutheria;
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LeuLeuAlaLeuValGlnGlyValSerAspPheLeuLeuGlyLysSerLeuAspIle
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                                                                                                                                                                        /product="putative sialoglycoprotease type 2"
/protein id="CAC14666.1"
/db_xref="g1:11071727"
/db_xref="G0A:99H480"
/db_xref="GOA:99H480"
/db_xref="GOA:99H480"
/db_xref="WniProt/TrEMEL:Q9H480"
/translation="MLILITKTACUPERCSKRKYEPLRSFNFHPETLFILHKIVLGIET
/translation="MLILITKTACUPERCSKRKYEPIPIHHMEAHALTIRLTNK
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GVSPSDLSAIATTIKPGLALSLGVGLSFSLQLVGQLKKPFIPIHHMEAHALTIRLTNK
VEFPFLVLLISGGHCLLALVQGVSDFILLGKSLDIAPCDMLDKVARRLSLIKHESCST
MSGGKAIEHLAKQGNRFHFDIKÞPLHHAKNCDFSFTGLQHVTDKIIMKKEKEGIFLI
SKVBQINIFGLCKIAAHFCRYEKGQILSSAADIAATVQHTMACHLVKRTHRAILFCK
QRDLLPQNNAVLVASGGVASNFYIRRALEILTNATQCTLLCPPPRLCTDNGIMIAWNG
IERLRGGLGILHDIEGIRYEPKCPLGVDISKEVGEASIKVPQLKMEI"
                                                                                                                                                                                                                                                                                                                                                        /tissue_type="uterus" 24. .1343
                                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
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                                                                                                                                                                                                                                                                                                                                 codon_start=1
                                                                                                                                                                                                                                                                                                                                            function="metallopeptidase of family M22"
                                                                      9.37e-111
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Primates;
                                            x HSA295148 (1-1387)
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Mismatches:
Indels:
Gaps:
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                                                                                                                                         Homo sapiens
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Leiby, K.R., Kapeller-Libermann, R. and Glucksmann, M. 38650, 28472, 5495, 65507, 81588 and 14354 methods of human proteins and uses thereof Patent: WO 02074960-A 6 26-SEP-2002; Millennium Pharmaceuticals, Inc. (US)
                                                                                                                                                       Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; I
Mammalia; Butheria; Primates; Catarrhini; Hominidae;
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AX664697.1 GI:29164457
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                    Homo sapiens
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VEFPFLVLLISGGHCLLALVQGVSDF1LLGKSLDIAPGDMLDKVARRISLIKHPECST
VEFPFLVLLISGGHCLLALVQGVSDF1LLGKSLDIAPGDMLDKVARRISLIKHPECST
NGGGKAIEHLAKQGNRFHFDIKFPLHKNCDFSFTGLQHVTDKNNNNCHSGEIEKG
QILSSAADIAATVQHTMACHLVKRTHHAILFCKQRDLLPQNNAVLVASGGVASHFYIR
RALEILTNATQCTLLCPPFRLCTDNGIMIAWNGIERLRAGLGILHDIBGIRYEPKCPL
GVDISKEVGEASIKVPQLKMEI"
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/mol_type≈"unassigned DN
/db_xref="taxon:9606"
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/note="unnamed protein
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BC058172
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Strauberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,

Klausner, R.D., Collins, P.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,

Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,

Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,

Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,

Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,

Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,

Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,

Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,

McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,

Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,

Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,

Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,

Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,

Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,

Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,

Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E.,

Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A.

Generation and mouse CDNA sequences
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                                         web site: http://www.nisc.nih.gov/
Contact: nisc_mgc@nhgri.nih.gov
Akhter,N., Ayele,K., Beckstrom-Sternberg,S.M., Benjamin,B.,
Blakesley,R.W., Bouffard,G.G., Breen,K., Brinkley,C., Brooks,S.,
Blakesley,R.W., Gunite,S., Guan,X., Gupta,J., Haghighi,P.,
Dietrich,N.L., Granite,S., Guan,X., Gupta,J., Haghighi,P.,
Hansen,N., Ho,S.-L., Karlins,E., Kwong,P., Laric,P., Legaspi,R.,
Maduro,Q.L., Masiello,C., Maskeri,B., Mastrian,S.D., McCloskey,J.C.,
McCDowell,J., Pearson,R., Stantripop,S., Thomas,P.J., Touchman,J.W.,
Tsurgeon,C., Vogt,J.L., Malker,M.A., Wetherby,K.D., Wiggins,L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (15-SEP-2003) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                       DNA Sequencing by: National Institutes of Health Intramural Sequencing Center (NISC), Gaithersburg, Maryland;
                                                                                                                                                                                                                                                                                                                                                                                                           cDNA Library Preparation: Life Technologies, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Gilbert Smith,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
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Mus musculus cDNA clone
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Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rect Submission
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                                Zhang, L.-H. and Green, E.D.
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121 HisLeuValLysArgThrHisArgAlaIleLeuPheCysLysGlnArgAspLeuLeuPro 140
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US-10-649-273-2_COPY_176_414 (1-239)
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Best Local Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                   807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              747
                                                                                                                                           81
                                                                                                                                                                                                                    61 HisPheAspIleLysProProLeuHisHisAlaLysAsnCysAspPheSerPheThrGly
                                                                                                                                                                                                                                                                                                                                41
                                                                                                                                                                                                                                                                                                                                                                                                         21 AlaProGlyAspMetLeuAspLysValAlaArgArgLeuSerLeuIleLysHisProGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 LeuLeuAlaLeuValGlnGlyValSerAspPheLeuLeuCeuLeuGlyLysSerLeuAspIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Series: IRAK Plate: 123 Row: d Column: 22
This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 21312463.
                                                                                                                                                                                                                                                                                                                      CysSerThrMetSerGlyGlyLysAlaIleGluHisLeuAlaLysGlnGlyAsnArgPhe
                                                                                                                                                                                                                                                                                                                                                                                   GlyGlnIleLeuSerSerAlaAlaAspIleAlaAlaThrValGlnHisThrMetAlaCys
                                                                                     LeuGlnHisValThrAspLysIleIleMetLysLysGluLysGluGluGlyIleGluLys 100
                                                                                                                                                                                         CATTITACTATCAATCCACCTATGCAGAATGCTAAGAATTGCGATTTTTCTTTTACGGGA
GGGCAAATCCTGTCATCAGCTGCAGACATTGCTGCTGCGGTACAGCATGCAACAGCGTGC
                                                                                                                                                                                                                                                                                      TGTTCTACAATGAGTGGTGGAAAAGCTATAGAACATTTGGCCAAAGACGGAAATAGATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /translation="MLMLRRTAGAIPKPPKSKVYGFLRRFSVHPRTLSCHKLVLGIET
SCDDTGAAVVDETGNVLGEALHSQTQVHLKTGGIVPPVAQQLHRENIQRIVEETLSAS
RITPSDLSAIATTIKPGLALSLGVGLSFSLQLVNRFKKPFIPHLHMEAHALTIRLTNK
VEFPFLVLLISGGHCLLALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECST
MSGKALEHLAKDGNRFHFTINPPMQNAKNCDPSFTGLQHITDKLITHKEKEBGIEKG
QILSSAADIAAAVQHATACHLAKRTHRAILFCKQKNLLSPANAVLVVSGGVASNLYIR
KALEIVANATQCTLLCPPPRLCTDNGIMIAMNGIERLRAGLGVLHDVEDIRYEPKCPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    modification, protein turnover, chaperones]
/db_xref="CDD:COG0533"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="QRI7; Region: Metal-dependent proteases with
possible chaperone activity [Posttranslational
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GIDISREVAEAAIKVPRLKMAL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /tissue_type="Mammary tumor metastatized to lung. The arose spontaneously from a senescent normal mammary (clonal) outgrowth infected with the virus MMTV." (clone_lib="NOI_CGAP_Lu29"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /codon_start=1
/producct="Unknown (protein for MGC:67870)"
/protein_ida"PAHS8172.1"
/db_xref="GI:34849664"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /lab_host="DH10B"
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/clone="MGC:67870 IMAGE:5012054"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mol_type="mRNA"
|strain="CZECH II"
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AUTHORS
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TITLE
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MEDLINE
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                                                                                                                                                                                                                                                                                                                                                                                                                            Strauberg, R.D., Feingold, E.A., Grouse, L.H., Derge, J.G.,

Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,

Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,

Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,

Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,

Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,

Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,

Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,

Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,

McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,

Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,

Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R. A.,

Fahey, J., Helton, E., Ketteman, M., Wadan, A., Kodrigues, S.,

Fahey, J., Helton, E., Ketteman, M., Wadan, A., C., Shevchenko, Y.,

Bouffard, G.G., Blakesley, R.W., Touchman, J. W., Green, E.D.,

Bouffard, G.G., Blakesley, R.W., Touchman, J. W., Green, E.D.,

Boutfard, G.G., Blakesley, R.W., Touchman, J. W., Green, E.D.,

Boutfard, G.G., Blakesley, R.W., Touchman, J. W., Green, E.D.,

Boutfard, G.G., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,

Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A.

Generation and initial analysis of more than 15,000 full-length

human and mouse cDNA sequences

Paragrafy.
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                                                                                                                                                                                                                 Submitted (25-OCT-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                      Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Jeffrey E. Green, M.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
                                                                                                                                  NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
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                                                                                                                                                                                                                                                                                                        Direct Submission
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                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 1017)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   musculus (house mouse)
Sequencing by: Genome Sequence Centre,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GI:24433548
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                               590 GCATTGGAAATTGCAAATGCAACGCAGTGCACGTTGTTGTGCCACCTCCAAGACTG
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BC Cancer Agency, Vancouver, BC, Canada
info@bcgsc.bc.ca
steven Jones, Jennifer Asano, Ian Bosdet, Yaron Butterfield,
Susanna Chan, Readman Chiu, Chris Fjell, Brin Garland, Ran Guin,
Letticia Hsiao, Martin Krzywinski, Reta Kutsche, Oliver Lee, Soo
Sen Lee, Victor Ling, Carrie Mathewson, Candice McLeavy, Steven
Ness, Pawan Pandoh, Anna-Liisa Prabhu, Parvaneh Saeedi, Jacqueline
Schein, Duane Smailus, Michael Smith, Lorraine Spence, Jeff Stott,
Michael Thorne, Miranada Tsai, Natasja van den Bosch, Jill Vardy,
George Yang, Scott Zuyderduyn, Marco Marra.
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Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Series: IRAK Plate: 86 Row: f Column: 12.

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               /tissue_type="Liver, normal.
/clone_lib="NCI_CGAP_Li9"
/lab_host="DH10B"
                                                                                                                              organism="Mus musculus"
                                                                                                                                                             Location/Qualifiers
                                                               /db_xref="taxon:10090"
/clone="IMAGE:5053559"
 note="Vector:
                                                                                               mol type="mRNA"
strain="FVB/N"
PCMV-SPORT6"
                                                 Ŋ
                                                 month old male mouse."
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Best Local Similarity: Query Match: US-10-649-273-2\_COPY\_176\_414 (1-239) Percent Similarity: 1.48e-97 1079.00 91.63% 85.77% 87.02% x BC038910 (1-1017) Conservative: Mismatches: Indels: Matches:

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Ъ	110 CTGTTGGCATTAGTCCAAGGTGTTTCCGATTTCCTGCTCCTTGGGAAGTCTTTGGACATA 169
Ą	21 AlaProGlyAspMetLeuAspLysValAlaArgArgLeuSerLeuIleLysHisProGlu 40
Дb	170 GCACCAGGCGACATGCTTGACAAGGTGGCAAGAAGACTTTCTTT
Ş	41 CysSerThrMetSerGlyGlyLysAlaIleGluHisLeuAlaLysGlnGlyAsnArgPhe 60
망	230 TGTTCTACAATGAGTGGGAAAAGCTATAGAACAGTTGGCCAAAGACGGAAATAGATTC 289
Ą	61 HisPheAspIleLysProProLeuHisHisAlaLysAsnCysAspPheSerPheThrGly 80
망	290 CATTTTACTATCAATCCACCTATGCAGAATGCTAAGAATTGCGATTTTTCTTTC
Ş	81 LeuGlnHisValThrAspLysIleIleMetLysLysGluLysGluGluGlyIleGluLys 100
Db	350 CTTCAACATATTACTGATAAGCTAATAACACACAAGGAAAAAGAAGAAGGCATTGAGAAG 409
Ş	101 GlyGlnIleLeuSerSerAlaAlaAspIleAlaAlaThrValGlnHisThrMetAlaCys 120
Db	410 GGGCAAATCCTGTCATCAGCTGCAGACATTGCTGCTGCGGTACAGCATGCAACAGCGTGC 469
δ	121 HisLeuValLysArgThrHisArgAlaIleLeuPheCysLysGlnArgAspLeuLeuPro 140
Db	470 CACCTTGCGAAAAGAACACATCGCGCTATTCTGTTTTGCAAGCAGAAAAATTTGCTCTCT 529
Ą	141 GlnAsnAsnAlaValLeuValAlaSerGlyGlyValAlaSerAsnPheTyrIleArgArg 160
Вb	530 CCAGCTAACGCAGTATTAGTTTGTATCTGGAGGTGTTGCAAGTAACTTGTACATCCGAAAA 589
δλ	161 AlaLeuGluIleLeuThrAsnAlaThrGlnCysThrLeuLeuCysProProProArgLeu 180
3	590 GCATTGGAAATTGGTGGAAGTGGAAGTTGGTGGTGGCAAGTTGGTGGGAGGTGGAAGTTGGTGGAAGTGGAAGTTGGTAATTGGAAGTTGGTAATTGGAAGTAGAAGTAGAAGTTGGAAGTAGAAGTAGAAGTAGAAGA

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KEYWORDS
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Query Match:
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JOURNAL
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1169
                                                                                                                    1049
                                                                                                                                                                                989
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Sequence
AX713716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Patent: EP 1293569-A 400
Helix Research Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Isogai,T., Sugiyama,T., Otsuki,T., Wakamatsu,A., Sato,H., Ishii,S. Yamamoto,J.I., Isono,Y., Hio,Y., Otsuka,K., Nagai,K., Irie,R., Tamechika,I., Seki,N., Yoshikawa,T., Otsuka,M., Nagahari,K. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Biotechnology (JP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Full-length cDNAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AX713716.1 GI:29888642
                                                                                                                                                                                                                                                            AlaProGlyAspMetLeuAspLysValAlaArgArgLeuSerLeuIleLysHisProGlu 40
                                                                                                                                                                                                                                                                                                                       LeuLeuAlaLeuValGlnGlyValSerAspPheLeuLeuLeuGlyLysSerLeuAspIle 20
            Gl;GlmIleLeuSerSeiAlaAlaAspIleAlaAlaThrValGlnHisThrMetAlaCys 120
                                                                       LeuGlnHisValThrAspLysIleIleMetLysLysGluLysGluGluGlyIleGluLys
                                                                                                                    CATTTTGACATCAAACCTCCCTTGCATCATGCTAAAAATTGTGATTTTCCTTTTACTGGA
                                                                                                                                   HisPheAspIleLysProProLeuHisHisAlaLysAsnCysAspPheSerPheThrGly
                                                                                                                                                                                                CysSerThrMetSerGlyGlyLysAlaIleGluHisLeuAlaLysGlnGlyAsnArgPhe
                                                                                                                                                                                                                                            GCACCAGGTGACATGCTTGACAAGGTGGCAAGAAGACTTCCTTTAATAAAAACATCCAGAG
                                                                                                                                                                                                                                                                                                       CTGTTGGCATTAGTTCAAGGAGTTTCAGATTTTCTGCTTCTTGGAAAGTCTTTGGACATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IleSerLysGluValGlyGluAlaSerIleLysValProGlnLeuLysMetGluIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCGTTTTACATGATGTAGAAGACATCCGATATGAACCAAAATGTCCTCTTGGAGTAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GlyIleLeuHisAspIleGluGlyIleArgTyrGluProLysCysProLeuGlyValAsp 220
                                                                                                                                                                                TGCTCCACCATGAGTGGTGGGAAAGCCATAGAACATTTGGCCAAACAAGGAAATAGATTT 1048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCACTGACAATGGCATCATGATTGCATGGAATGGAATTGAAAGATTACGTGCTGGCTTG 709
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/mol_type="unassigned DNA"
/db_xref="taxon:9606"
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                                                                                                                                                                                                                                       Ota, T., Suzuki, Y., Nishikawa, T., Otsuki, T., Sugiyama, T., Irie, R., Wakamatsu, A., Hayashi, K., Sato, H., Nagai, K., Kimura, K., Makita, H., Sekihe, M., Obayashi, M., Nishi, T., Shibahara, T., Tanaka, T., Ishii, S., Yamamoto, J., Saito, K., Kawai, Y., Isono, Y., Nakamura, Y., Nagahari, K., Murakami, K., Yasuda, T., Iwayanagi, T., Wagatsuma, M., Shiratori, A., Sudo, H., Hosoiri, T., Kaku, Y., Kodaira, H., Kondo, H., Sugawara, M., Takahashi, M., Kanda, K., Yokoi, T., Furuya, T., Yamazaki, M., Nanda, K., Yokoi, T., Furuya, T., Tanikawa, M., Yamazaki, M., Ninoniya, K., Ishibashi, T., Yamashita, H., Murakawa, K., Pujimori, K., Tanai, H., Kimata, M., Watanabe, M., Hiraoka, S., Chiba, Y., Ishida, S., Ono, Y., Takiguchi, S., Watanabe, S., Yosida, M., Hotuta, T., Kusano, J., Kanehori, K., Takahashi-Fujii, A., Hara, H., Tanase, T., Nomura, Y., Togiya, S., Komai, F., Hara, R., Takeuchi, K., Arita, M., Imose, N., Musashino, K., Yuuki, H., Oshima, A., Sasaki, N., Aotsuka, S., Yoshikawa, Y., Matsunawa, H., Ichihara, T., Sasaki, N., Aotsuka, S., Yoshikawa, Y., Matsunawa, H., Ichihara, T., Goto, Y., Shimizu, F., Wakegawa, S., Senoh, A., Mizouchi, H., Goto, Y., Shimizu, F., Wakegawa, S., Senoh, A., Mizouchi, H., Goto, Y., Shimizu, F., Wakegawa, S., Senoh, A., Mizouchi, H., Chihara, T., Tanigami, A., Fujiwara, T., Ono, T., Yamada, K., Fujiin, Y., Komati, R., Kawakami, T., Noguchi, S., Itch, T., Shigeta, K., Senba, T., Watanabe, K., Niiri, Shigata, K., Shikani, R., Kawakami, T., Nakagawa, K., Shikani, R., Kawakami, T., Nakagawa, Y., Matsumura, K., Nakagawa, T., Nakagawa, Y., Matsumura, K., Nakagawa, T., Nakagawa, T., Ohamoto, S., Okitani, R., Kawakami, T., Nakagawa, T., Nakagawa, T., Ohamoto, Y., Yamadahi, T., Nakagawa, T., Nakagawa, T., Ohamura, K., Nakagawa, T., Ohamura, K., Nakagawa, T., Ohamura, K., Nakagawa, T., Ohamura, K., Nakagawa, T., Ohamura, K., Nakagawa, T., Ohamura, K., Nakagawa, T., Ohamura, K., Ohumura, K., Nakagawa, T., Nakagawa, T., Ohama, T., Anda, S., Saki, M., Nakagawa, T., Ohama, T., Anda, S., Saki, M., N
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Nishi,T., Nakagawa,S., Senoh,A., Mizuguchi,H., Inagaki,H.,
Sugiyama,T., Irie,R., Otsuki,T., Sato,H., Wakamatsu,A., Ishii,S.,
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Best Local Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Yamamoto,J., Isono,Y., Kawai-Hio,Y., Saito,K., Nishikawa,T., Kimura,K., Yamashita,H., Matsuo,K., Nakamura,Y., Sekine,M., Kikuchi,H., Kanda,K., Wagatsuma,M., Murakawa,K., Kanehori,K., Takahashi-Fujii,A., Oshima,A., Sugiyama,A., Kawakami,B., Suzuki,Y., Sugano,S., Nagahari,K., Masuho,Y., Nagai,K. and Isogai,T. NEDO human cDNA sequencing project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Direct Submission Submitted (24-OCT-2001) Takao Isogai, Helix Research Institute,
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Isogai, T., Otsuki, T. and Sugiyama, T.
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LeuGlnHisValThrAspLysIleIleMetLysLysGluLysGluGluGlyIleGluLys 100
                                                                           CATTTI
                                                                                                     HisPheAspIleLysProProLeuHisHisAlaLysAsnCysAspPheSerPheThrGly
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                                                                                                                                                                                                                                                                           GCACCAGGTGACATGCTTGACAAGGTGGCAAGAAGACTTCCTTTAATAAAACATCCAGAG
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qilssaadiaatvQhtmachlvkrthrailfckQrdllpQnnavlvasggvasnfcir
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/db_xref="GI:16550167"
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clone_lib="FEBRA2"
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1059.00
88.28%
88.28%
85.40%
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b_xref="taxon:9606"
lone="FEBRA2004592"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
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211
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AUTHORS
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JOURNAL
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                       REMARK
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                                                                                                                                                                                                                                                      RS. Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,
Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,
Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,
Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,
McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,
Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,
Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,
Fahey, J., Helton, E., Ketteman, M., Madan, A., Young, A.C., Shevchenko, Y.,
Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E.,
Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E.,
Generation and initial analysis of more than 15,000 full-length
human and mouse cDNA sequences
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BC078974.1
USA
NIH-MGC Project URL: http://mgc.nci.nih.gov
                                                                                                      Direct Submission
Submitted (02-AUG-2004) National Institutes of Health, Mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Mētazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rattus norvegicus (Norway rat)
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                                                                 Gene Collection (MGC), Cancer Genomics (Institute, 31 Center Drive, Room 11A03,
                                                                                                                                                            Director MGC Project.
                                                                                                                                                                                                                        Proc. Natl. Acad. Sci. U.S.A.
                                                                                                                                                                                                                                                  human and mouse cDNA sequences
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | IleSerLysGluValGlyGluAlaSerIleLysValProGlnLeuLysMetGluIle 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GlyIleLeuHisAspIleGluGlyIleArgTyrGluProLysCysProLeuGlyValAsp 220
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CATCTTGTGAAAAAGAACACATCGGGCTATTCTGTTTTGTAAGCAGAGAGACTTGTTACCT
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                                                                                                                                                                              (bases 1 to 1546)
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IMAGE:7111906, partial
                                                                                                                                                                                                                          99 (26), 16899-16903
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                                                                                          Office,
                                                                     Bethesda,
                                                                                          National Cancer
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
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                                                                                                                                                                                                                                       21 AlaProGlyAspMetLeuAspLysValAlaArgArgLeuSerLeuIleLysHisProGlu
                                                                                                                                                                                                                                                                                                                              _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Clone distribution: MGC clone distribution information can be for through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Series: IRAK Plate: 182 Row: f Column: 6
This clone was selected for full length sequencing because it passed the following selection criteria: Hexamer frequency ORF analysis, Similarity but not identity to protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cDNA Library Preparation: Express Genomics cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Sequencing Group at the Stanford Human Center, Stanford University School of Medicine, Stanford,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: MGC help desk
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Howard J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dickson, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Web site:
                      LeuGlnHisValThrAspLysIleIleMetLysLysGluLysGluGluGlyIleGluLys 100
                                                                                                   HisPheAspIleLysProProLeuHisHisAlaLysAsnCysAspPheSerPheThrGly
                                                                                                                                                                    CysSerThrMetSerGlyGlyLysAlaIleGluHisLeuAlaLysGlnGlyAsnArgPhe
                                                                                                                                                                                                                                                                                                           LeuLeuAlaLeuValGlnGlyValSerAspPheLeuLeuLeuGlyLysSerLeuAspIle
                                                                                                                                                                                                                                                                                         CTGTTGGCGTTAGTTCAGAGTGTTTCAGATTTTCTGCTCCTCGGGAAGTCCCTGGACATA
   CTTCAACATGTCACCGATAAGCTAATAACACACAAGGAAAAAAGAAGAAGGCATTGAGAAG
                                                                                                                                                TGTTCTACAATGAGTGGTGGGAAAGCTATAGAACATTTGGCCAAAGAAGGAAATAGATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /translation="mimilktagaiprpprsnvrgfirrpnvqpralfhktulgiet
scddtaaavvdbetgnvlgealhsqtevhkktggivppvaqquhernigrivebalsas
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vgfspflvilisgghcllalsigvsguhunghkpfipihhtkvarrlslikhpecst
gfskaiehlakegnrehftirppmqnakncdpsftglghungklithkebegiekg
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rsggkaiehlakegnrehftirphmqnakncdbsgrganiqtsmcsctqtymrtvrhte
sussaadiaaavqhatachlakrthrailfcdksgrganiqtsmcsctqtymrtvrhte
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /product="Unknown (protein for IMAGE:7111906)"
/protein_id="AAH78974.1"
/db_xref="GI:50926880"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /tissue_type="Testis, rat
/clone_lib="NIH_MGC_237"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /mol_type="mRNA"
/db_xref="taxon:10116"
/clone="IMAGE:7111906"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            http://www-shgc.stanford.edu
(Dickson, Mark) mcd@paxil.stanford.edu
M., Schmutz, J., Grimwood, J., Rodriquez,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                codon_start=1
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mol_type="mRNA"
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983.00
92.06%
87.85%
79.27%
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Indels:
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Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (Brown Norway)"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and
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                                                                         908
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161 AlaLeuGluIleLeuThrAsnAlaThrGlnCysThrLeuLeuCysProProProArgLeu
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: cgapbs-remail.nih.gov
Tissue Procurement: Marcello Bento Soares, Ph.D.
cDNA Library Preparation: M. Bento Soares, University of Iowa
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Institute for Systems Biology
http://www.systemsbiology.org
contact: amadanneystemsbiology.org
Anup Madan, Jessica Fahey, Erin Helton, Mark Ketteman, Anuradha
Madan, Stephanie Rodrigues, Amy Sanchez and Michelle Whiting
                                                                                                                                                                                                                                                                                                                                                              Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLMI at: http://image.llnl.gov Series: IRAK Plate: 113 Row: b Column: 1
This clone was selected for full length sequencing because it passed the following selection criteria: Hexamer frequency ORF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (14-APR-2003) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus, clone IMAGE:1327545, BC051211
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/tissue_type="Thymus gland, mous
/clone_lib="Soares_thymus_2NbMT"
/lab_host="DH10B"
                                                                                             /mol_type="mRNA"
/strain="C57BL/6J"
/db_xref="taxon:10090"
/clone="IMAGE:1327545"
                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                     organism="Mus musculus"
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                 ORGANISM
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            Gallus gallus (chicken)
Gallus gallus
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Gallus gallus finished
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Eukaryota; Metazoa; Chordata;
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CGATTAAAAATGGCACTT 876
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This sequence is from the
BBSRC/Dundee/Nottingham/Sanger/Sheffield/UMIST cDNA collection,
EBSRC/Dundee/Nottingham/Sanger/Sheffield/UMIST cDNA was prepared
from a library constructed by Elizabeth Bosch. cDNA was prepared
from RNA extracted from limbs, normalised, and poly A-trimmed.
ECORI. NotI cut cDNA was then ligated into the vector. Vector:
pBluescript II KS(+); Site_1: ECORI; Site_2: NotI Host: Escherichia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Boardman, P.E., Bonfield, J.K., Brown, W.R.A., Carder, C., Chalk, S., Croning, M.D.R., Davies, R.M., Francis, M.D., Grafham, D.V., Hubbard, S.J., Humphray, S.J., Hunt, P.J., Maddison, M., McLaren, S., Niblett, D., Overton, I.M., Rogers, J., Scott, C.E., Taylor, R.G., Tickle, C. and Wilson, S.A. Direct Submission Submitted (29-MAR-2004) Sanger Institute, Hinxton, Cambridgeshi CB10 15A, UK. E-mail enquiries: chickest@bms.umist.ac.uk On Apr 1, 2004 this sequence version replaced gi:41631222. BBSRC/Dundee/Nottingham/Sanger/Sheffield/UMIST Gallus gallus cD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Archosauria; Aves; Neognathae; Phasianinae; Gallus.
1 (bases 1 to 860)
                 GlnAsnAsnAlaValLeuValAlaSerGlyGlyValAlaSerAsnPheTyrIleArgArg
                                                                                                                                                      GlyGlnIleLeuSerSerAlaAlaAspIleAlaAlaThrValGlnHisThrMetAlaCys
                                                                                                                                                                                                                            LeuGlnHisValThrAspLysIleIleMetLysLysGluLysGluGluGlyIleGluLys
                                                                                                                                                                                                                                                                       GCACCAGGTGACATGCTGGATAAGGTAGCAAGAAGGCTCTCTTTAGTGAAGCACCCGGAG
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                                                                                     HisLeuValLysArgThrHisArgAlaIleLeuPheCysLysGlnArgAspLeuLeuPro
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 CCAAAAACTGCAACTCTGGTTGTATCAGGAGGAGTTGCAAGTAATCAGTATATCAGAAAA
                                                                    CATATTATCCAGCGGACACACCGAGCCATGCTCTTCTGCATGAAAAAACAGCATATTATTA
                                                                                                                                    GGGGAAATCCTGTCCTGCGTTAAGGACATCGCTGCTGCTGCACACACCACGTAGTGGCTGCT
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/clone_lib="CSEQCHN59"
/dev_stage="stage 36"
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/mol_type="mRNA"
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/strain="White Leghorn,
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Search Job tim	Db	ş	Db	ş	DЬ	Ş	Db	Ş
Search completed: November 10, 2005, 22:36:56 Job time : 4721.79 secs	754 ATTTCCAAAAGAGTTGAAGAGGATTCCATCAAAGTGCCAAGACTAAGG 801	221 IleSerLysGluValGlyGluAlaSerIleLysValProGlnLeuLys 236	694 GGTATTTTATACAGTACTGATGGCATCCGCTACGAACCAAAAGCTCCCCTTGGAATTGAT 753	201 GlyIleLeuHisAspIleGluGlyIleArgTyrGluProLysCysProLeuGlyValAsp 220	634 TGCACCGATAATGGTGTATGATTGCATGGAATGGCATTGAAAGGTTGCGTGCAGGATGT 693	181 CysThrAspAsnGlyIleMetIleAlaTrpAsnGlyIleGluArgLeuArgAlaGlyLeu 200	574 GGACTGCAGACTCTGGCAAATGCAAACGGTTTTGCTTTTCTGTCTCCTCCTCCAAGGCTG 633	161 AlaLeuGluIleLeuThrAsnAlaThrGlnCysThrLeuLeuCysProProProArgLeu 180

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-MODEL=frame+_p2n.model
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Aad48239 Ehrlichia
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Aaa00934 Human col
Aah169109 Human cDN
Aah15110 Human cDN
Aa854064 Pseudomon
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Aca60887 Human cDN
Abs57020 cDNA enco
Ada52832 Human cod
Adq24627 Human sof
Adg31345 Human dia
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# ALIGNMENTS

ABX70950 standard;

CDNA; 1416

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Human; gene; ss; nervous system disorder; peripheral neuropathy; huntington's disease; amyotrophic lateral sclerosis; haemophilia; neurodegenerative disease; Parkinson's disease; Alzheimer's disease; autoimmune disease; eystemic lupus erythematosus; rheumatoid arthritis; insulin-dependent diabetes mellitus; anaemia; thrombocytopaenia; wound; ulcer; burn; bone disorder; osteoporosis; osteoarthritis; stroke; tolorosis; reperfusion injury; infection; allergic rhinitis; asthma; coagulation disorder; cancer; tumour; inflammatory disease; septic shock; crohn's disease; anaphylaxis; proliferation; chemotactic; differentiation; stem cell growth factor; haematopoiesis; chemokinetic;
29-JAN-2002; 2002WO-US001222
                                                                                                                      Homo sapiens.
                                                                                                                                                             haemostatic; antiinflammatory; expressed sequence tag; EST.
                                                                                                                                                                                                                                                                                                                                                                                                        Novel human cDNA sequence #175.
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Result No.

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Description

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Best Local Similari
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This invention relates to the cDNA sequences encoding an isolated novel CC human polypeptide. The protein encoded by the nucleic acid of the CC invention is useful for treating central and peripheral nervous system CC diseases (e.g. peripheral neuropathy, Huntington's disease, amyotrophic CC lateral sclerosis); neurodegenerative diseases (e.g. Parkinson's disease, CC Alrheimer's disease); autoimmune disease (e.g. systemic lupus CC erythematosus, rheumatoid arthritis, insulin-dependent diabetes mellitus) (e.g. myeloid or lymphoid cell disorders (e.g. anaemia and thrombocytopaenia); wounds, ulcers, burns; bone disorders (e.g. anaemia and thrombocytopaenia); consteoarthritis); mechanical and traumatic disorders (e.g. stroke, head CC esteoarthritis); mechanical and traumatic disorders (e.g. stroke, head CC concerand tumours; and infections; allergic conditions such as allergic rhinitis, asthma; coagulation disorders (e.g. haemophilia); CC cancer and tumours; and inflammatory diseases (e.g. septic shock, Crohn's CC disease, anaphylaxis). The protein may be used to inhibit the growth, CC viruses, or to effect bodily characteristics, biorhythms or circadian conviction of infectious agents such as bacteria, fungi, and a convening and convening the protein of protein may be used to inhibit the growth.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cycles of rhythms. The protein may also have proliferation/differentiation, stem cell growth factor, haematopoiesis regulation, immune stimulating or suppressing, chemotactic/chemokinetic, haemostatic and thrombolytic, receptor/ligand, and antiinflammatory activities. The cDNA sequences of the invention are useful for expressing recombinant protein for analysis. The present sequence represents a novel human cDNA sequence of the invention, this sequence is an expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Novel polypeptide useful for treating neurodegenerative diseases, myeloid or lymphoid cell disorders, bone disorders, mechanical and traumatic disorders, coagulation disorders, and inflammatory diseases.
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Yang Y,
LeuGlnHisValThrAspLysIleIleMetLysLysGluLysGluGlyGlyIleGluLys
                                                                         HisPheAspIleLysProProLeuHisHisAlaLysAsnCysAspPheSerPheThrGly
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                                                                                                                                                                                                                                                                                                                                                                                       Metalloprotease; MP-1; immune disorder; glutamate transport; cancer; motor neuron disorder; amyotrophic lateral sclerosis; ALS; diabetes; reproductive disorder; Kleinfelter's syndrome; germinal cell aplasia; genital wart; metabolic disorder; premature puberty; Kallman syndrome; Cushing's syndrome; neurodegenerative disease; Alzheimer's disease; Parkinson's disease; Huntington's disease; Tourette syndrome; sepsis; liver disease; renal disease; mumune disorder; rheumatoid arthritis; acquired immunodeficiency syndrome; AIDS; pulmonary disease; preumonia emphysema; systic fibrosis; vascular disorder; inflammatory disorder;
                New isolated nucleic acid encoding MP-1 protein, useful for preventing, treating, or ameliorating diseases associated with aberrant metalloproteinase activity, e.g. immune, metabolic, inflammatory and
                                                                                                                                                                                              05-FEB-2001;
10-APR-2001;
                                                                                                                                                                                                                                              05-FEB-2002; 2002WO-US003353
                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                           neurological disorder; gene;
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2001US-0282814P.
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treating, or ameliorating diseases associated metalloproteinase activity, e.g. immune, neurological disorders.

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The invention describes an isolated nucleic acid molecule (I) encoding a metalloprotease (MP-1). (I) is useful for preventing, treating, or ameliorating a medical condition, particularly an immune disorder, an aberrant glutamate transport or motor neuron disorder, such as aberrant glutamate transport or motor neuron disorder, such as condition. The compositions and methods are also useful for diagnosing, prognosticating, treating, ameliorating and/or treating disorders prognosticating, treating, ameliorating and/or treating disorders associated with MP-1 activity, e.g. diabetes, cancer, reproductive disorders (e.g. Kleinfelter's syndrome, genital warts, or germinal cell aplasia), metabolic disorders (e.g. premature puberty, Kallman syndrome, or Cushing's syndrome), neurodegenerative diseases (Alzheimer's disease, Parkinson's disease, Huntington's disease or Tourette syndrome), liver and renal diseases and immune disorders (e.g. AIDS, rheumatoid arthritis or sepsis), pulmonary diseases (e.g. pneumonia, emphysema or cystic fibrosis) and vascular, inflammatory and neurological disorders (e.g. Alzheimer's disease or Parkinson's disease). This sequence represents a
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Sequence 1526 BP; 484 A; 297 C; 289 G; 456 7 0 U; 0 Other;

metalloprotease MP1 polynucleotide

Percent Similarity:

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             CyaThrAspAsnGlyIleMetlleAlaTrpAsnGlyIleGluArgLeuArgAlaGlyLeu
                                                                 AlaLeuGluIleLeuThrAsnAlaThrGlnCysThrLeuLeuCysProProProArgLeu
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TGCACTGATAATGGCATTATGATTGCATGGAATGGTATTGAAAGACTACGTGCTGGCTTG
                                                                                                        CAAAATAATGCAGTACTGGTTGCATCTGGTGGTGTCGCAAGTAACTTCTATATCCGCAGA
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CTGTTGGCATTAGTTCAAGGAGTTTCAGATTTTCTGCTTCTTGGAAAGTCTTTGGACATA

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                                                                                                                                                                                      The present sequence encodes human O-sialoglycoproteinase-like protein (OSGPLP). The present invention also describes: (1) the preparation of the OSGPLP protein; (2) applying the OSGPLP protein in diagnosis; (3) the prevention and/or treatment of related diseases; (4) utilising the OSGPLP protein in screening its agonist, excitomotor and inhibitor and preparing an antibody against the OSGPLP protein; and (5) the use of the OSGPLP polynucleotide sequences, proteins, agonists, excitomotors, inhibitors and antibodies in treating diseases related to the abnormal OSGPLP gene and in preparing the medicine composite for the treatment
                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                        Claim 5;
                                                                                                                                                                                                                                                                                                                                                O-sialogycoproteinase-like protein and encoding for diagnosing, preventing and treating related
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LeuLeuAlaLeuValGlnGlyValSerAspPheLeuLeuLeuGlyLysSerLeuAspIle 20
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention describes an isolated nucleic acid molecule (I) encoding a metalloprotease (MP-1). (I) is useful for preventing, treating, or ameliorating a medical condition, particularly an immune disorder, an aberrant glutamate transport or motor neuron disorder, such as amyotrophic lateral sclerosis (ALS), its juvenile form or an ALS-like condition. The compositions and methods are also useful for diagnosing, prognosticating, treating, ameliorating and/or treating disorders associated with MP-1 activity, e.g. diabetes, cancer, reproductive disorders (e.g. Kleinfelter's syndrome, genital warts, or germinal cell aplasia), metabolic disorders (e.g. premature puberty, Kallman syndrome, parkinson's disease, Huntington's disease or Tourette syndrome), liver and renal diseases, dimnune disorders (e.g. AIDS, rheumatoid arthritis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              or sepsis), pulmonary diseases (e.g. pneumonia, emphysema or cystic fibrosis) and vascular, inflammatory and neurological disorders (e.g. Alzheimer's disease or Parkinson's disease). This sequence represents metalloprotease MP1 polynucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New isolated nucleic acid encoding MP-1 protein, useful for preventing, treating, or ameliorating diseases associated with aberrant metalloproteinase activity, e.g. immune, metabolic, inflammatory and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
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HisLeuValLysArgThrHisArgAlaIleLeuPheCysLysGlnArgAspLeuLeuPro
                                                                 GlyGlnIleLeuSerSerAlaAlaAspIleAlaAlaThrValGlnHisThrMetAlaCys
                                                                                                                                                                                          HisPheAspIleLysProProLeuHisHisAlaLysAsnCysAspPheSerPheThrGly
                                                                                                                                                                                                                                                          CysSerThrMetSerGlyGlyLysAlaIleGluHisLeuAlaLysGlnGlyAsnArgPhe
                                                 GGGCAAATCCTGTCTTCAGCAGCAGACATTGCTGCCACACTACAGCACACAATGGCATGT
                                                                                                                               LeuGlnHisValThrAspLysIleIleMetLysLysGluLysGluGlyIleGluLys
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11-JUL-2001; 2001US-0305405P.
09-AUG-2001; 2001US-0311442P.
24-AUG-2001; 2001US-0314821P.
29-AUG-2001; 2001US-0315992P.
03-MAY-2002; 2002US-0378205P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          antiulcer; hepatotropic; gymaecological; antibacterial; virucide; protozoacide; antiparasitic; cell proliferative disease; PMOD; protein modification and maintenance molecule; immunogenic fragment; cancer; autoimmune; inflammatory disease; neurological disorder; gastrointestinal; developmental; vesicle trafficking disorder; infection; protein-protein interaction; drug-target interaction; gene expression profile; human; gene; ds.
New isolated human PMOD polypeptide and polynucleotide, useful for diagnosing, treating and preventing diseases or conditions associated with the aberrant PMOD expression, e.g. cancer, AIDS, atherosclerosis
                                                                                                                       Forsythe IJ, Barroso I,
Thangavelu K, Gietzen K
Walia NK, Mason PM, Gu
Elliott VS, Luo W, Spr
                                                                         WPI; 2003-184039/18.
P-PSDB; ABJ26654.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cytostatic; antiarteriosclerotic; anti-HIV; antiallergic; anticonvulsant; cerebroprotective; antiparkinsonian; nootropic; antiinflammatory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human protein modification + maintenance molecule DNA SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABT23207;
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                                                                                                                   Kable AE, Swarnakar A, Hafalia AJA, Tran B, Dugga. Ison CH, Honchell CD, Nguyen DB, Lu DAM, Lee EA, J, Barroso I, Ramkumar J, Griffin JA, Li JX, Yang, K, Gietzen KJ, Ding L, Baughn MR, Borowsky ML, Ya. Mason PM, Gururajan R, Lee S, Becha SD, Lee SY, T, Luo W, Sprague WW, Tang YT, Lu Y, Zebarjadian Y;
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JX, Yang J;
aky ML, Yao MG;
Tran Uf
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FX#X5555555555555555555555555555555
                                                The invention relates to an isolated polypeptide comprising: any of 28 cs equences of 48-1256 amino acids; a natural amino acid sequence at least 90% identical to the 28 amino acids sequences, 94% identical to a sequence of 173 or 267 amino acids, 96% identical to a sequence of 414 amino cci acids, or 97% identical to a sequence of 414 amino cci the specification; or a biologically active or immunogenic fragment of the isolated polypeptide. The polypeptides and polymucleotides are useful in diagnosing, treating and preventing diseases or conditions associated with the decreased expression of protein modification and maintenance complexed to the isolated expression of protein modification and maintenance complexed to the indiagnosis, autoimmune/inflammatory diseases (e.g. cancer, cc epilepsy), gastrointestinal (e.g. ulcer, cirrhosis), reproductive (e.g. epilepsy), gastrointestinal (e.g. ulcer, cirrhosis), reproductive (e.g. concer, cirrhosis), developmental, vesicle trafficking disorders, and cc infections (e.g. bacterial, viral, parasitic, protozoal). These are also cuseful in assessing the effects of exogenous compounds on the expression of nucleic acid and amino acid sequences of pMOD. The pMOD or its or antagonist of the polypeptides, or in altering the expression of the target polynucleotide and compounds that specifically bind to or modulate creativity of the polypeptides. The microarray is useful in monitoring compounds on the expression of the activity of the polypeptide. The microarray is useful in monitoring compounds on the expression of the activity of the polypeptides. The increarcions, drug-target interactions, and compounds on the monitoring or modulate that specifically bind to or modulate the activity of the polypeptides. The microarray is useful in monitoring compounds on the expression of the expression profiles. This polynucleotide sequence represents the DNA encoding a human PMOD protein of the invention
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Sequence 2572 B₽; 780 A; 489 C; 509 <u>ი</u> 794 T; 0 U; 0 Other;

Alignment S Pred. No.: Score:

Scores:

Query Match: DB:

Percent Similarity: Best Local Similarity:

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                                                                              GlyGlnIleLeuSerSerAlaAlaAspIleAlaAlaThrValGlnHisThrMetAlaCys
                                      HisLeuValLysArgThrHisArgAlaIleLeuPheCysLysGlnArgAspLeuLeuPro
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CAAAATAATGCAGTACTGGTTGCATCTGGTGGTGTCGCAAGTAACTTCTATATCCGCAGA
                                                                                                                       LeuGlnHisValThrAspLysIleIleMetLysLysGluLysGluGluGlyIleGluLys
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; adenosine deaminase; seven transmembrane domain receptor; cancer; 7TM; glycoprotease; immune disorder; IgA deficiency; allergy; arrhythmia; rheumatoid arthritis; diabetes; atheroselerosis; cardiovascular disorder; hypertension; ischaemic heart disease; obesity; myocardial infarction; endothelial cell disorder; Grave's disease; psoriasis; brain disorder; Parkinson's disease; Alehemer's disease; haematopoietic disorder; cerebral oedema; metabolic disorder; liver disorder; platelet disorder; chromosome mapping; tissue typing; gene therapy; neuroprotective;
                          The present invention relates to novel 38650, 28472, 5495, 65507, 81: or 14354 nucleic acid molecules which encode adenosine deaminase, gliprotease or seven transmembrane domain (7TM) receptor family members
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               08-NOV-2000; 2000US-0246768P
08-NOV-2000; 2000US-0246772P
15-NOV-2000; 2000US-0249185P
                                                                                                                                          Claim 1; Fig
                                                                                                                                                                                                                      useful for diagnosing and treating cancer, immune, cardiovascular, hematopoietic, brain, pain, metabolic, liver or platelet disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08-NOV-2001; 2001WO-US051427
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human glycoprotease 28472 cDNA.
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DB; AAE29234.
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                                                                                                                                                                                                                                                                                    28472, 5495, 65507, 81588 or 14354 nucleic acid molecules,
                                                                                                                                                                                                                                                                                                                                                                                                                                  Kapeller-Libermann
the invention are useful in diagnosing
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/note= "This region is specifically claimed as SEQ
6 in claim 1 of the specification"
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                                                                                                cor aberrant cellular proliferation and/or differentiation (e.g. colon or lung cancer), immune disorders (e.g. selective IgA deficiency, rheumatoid arthritis, diabetes, allergy), heart or cardiovascular disorders (e.g., typertension, atherosclerosis, arrhythmias, ischaemic heart disease, cypertension, cypertension, thrombus) including endothelial cell disorders (e.g. psoriasis, Grave's disease), heematopoietic disorders, brain cypertension, cypertension, parkinson's or Alzheimer's disease), cypertension, and metabolic disorders (e.g. obesity), liver disorders or platelet cypertension, and metabolic assays, prognostic assays, predictive medicine cypertension, are also be used in chromosome mapping clinical trials concleic acids may also be used in chromosome mapping, tissue typing and cypertensic biology and as surrogate markers. Sequences of the invention are also used in gene therapy. The present sequence is human glycoprotease
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Sequence 1820 B₽; 543 A; 365 Ç 393 <u>ن</u> 518 Η, 0 U; 1 Other;

Best Local Similarity: Query Match:
DB:

1203.01 98.33\* 97.07\* 97.02\*

Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:

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                                                            CysThrAspAsnGlyIleMetIleAlaTrpAsnGlyIleGluArgLeuArgAlaGlyLeu
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                                                TGCACTGATAATGGCATTATGATTGCATGGAATGGTATTGAAAGACTACGTGCTGGCTTG 1270
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IleSerLysGluValGlyGluAlaSerIleLysValProGlnLeuLysMetGluIle 239

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RESULT 7
ACA60887
The invention relates to an isolated 3850 (encoding adenosine CC deaminase), 28472 (encoding a glycoprotease), 5495 (encoding a 7 CC transmembrane receptor), 65507, 81588 or 14354 nucleic acid molecule (or cc transmembrane receptor), 65507, 81588 or 14354 nucleic acid molecule (or a sequence which is at least 60% identical to the six nucleic acids or ct their open reading frames, fragments of at least 15 nucleotides, construing variants, or a DNA insert of the plasmid deposited contains the American Type Culture Collection as Accession No. not defined in the specification, which encodes the amino acid sequence). Also included are a host cell containing the nucleic acids (used to produce the proteins), the encoded proteins, an antibody that selectively binds to ct the polypeptide, and identifying a compound that binds to/modulates the activity of the polypeptide. The nucleic acid molecules, polypeptides and cmethods are useful for diagnosing, treating cancer, aberrant cellular cy proliferation and/or differentiation, immune disorders, heart disorders, cardiovascular disorders including endothelial cell disorders, pain candentabolic disorders, blood vessel disorders, brain disorders, pain candentabolic disorders, liver disorders in the specification). The present cycle sequence is the Human cDNA 28472 encoding a glycoprotease
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08-NOV-2000; :
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and liver disorders.
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Cancer; aberrant cell proliferation; aberrant cell differentiation; breast cancer; ovarian cancer; prostate cancer; colon cancer; lung cancer; immune disorder; heart disorder; cardiovascular disord
                                                                                                   cDNA encoding
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DB:
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                                                                                                                                                                                                                                                                                                         CC 14354 nucleic acid molecules (I) and their encoded polypeptides (II). The 28470 nucleic acid molecule comprises a sequence encoding adenosine CC deaminase. The 28472 nucleic acid molecule comprises a sequence encoding deamosine CC deaminase. The 28472 nucleic acid molecule comprises a sequence encoding CC a human glycoprotease. The 5495, 65907, 81588 and 14354 comprise CC sequences that encode a human seven transmembrane domain (7TM). The CC sequences are useful for diagnosing, preventing or treating a subject CC with or at risk of developing a disorder, e.g. cancer or aberrant CC cellular proliferation and/or differentiation (e.g. breast, ovarian, CC prostate, colon or lung cancer), immune disorders, heart disorders, cardiovascular disorders, endothelial disorders, heart disorders, broan disorders, pain and metabolic disorders, CC liver disorders or platelet disorders. These disorders include carcinoma, Sarcoma, leukaemia, Hodgkin's disease, autoimmune disorders, Kawasaki CC syndrome, Raynaud's disease, Tearr failure, myocardial infarction, CC ischaemic, cheart disease, Crohn's disease, Grave's disease, Kawasaki CC syndrome, Raynaud's disease, Aneurysm, cerebral ischaemia, peripheral curopathy, Alzheimer's disease, Parkinson's disease, anorexia nervosa, CC cachexia or diabetes. This sequence encodes the novel human glycoprotease
                                                                                                                                                                                                                                                                                          cachexia
28472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention describes isolated 38650, 28472, 5495, 65507, 81588 and 14354 nucleic acid molecules (I) and their encoded polypeptides (II). 38650 nucleic acid molecule comprises a sequence encoding adenosine
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08-NOV-2000; 2000US-0246772P.
15-NOV-2000; 2000US-0249185P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          myocardial infarction;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New adenosine deaminase, glycoprotease and nucleic acids and polypeptides, designated 81588 and 14354, useful for treating e.g. l
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/product= "Glycoprotease 28472"
/note= "Specifically claimed in claim
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leukemias, Hodgkin's
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14-SEP-2001; 2001JP-00328381
                           21-MAR-2002; 2002EP-00006586
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present invention relates to novel human secretory or membrane proteins (ADA54072-ADA55710) and their coding sequences (ADA52433-ADA54071). The coding sequences are useful in the gene therapy of diseases caused by abnormalities of the proteins, e.g. cancer, inflammatory diseases, osteoporosis or neurological disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Isogai T,
Yamamoto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New polynucleotides encoding full-length polypeptides, e.g. secretory and/or membrane proteins, useful for developing medicines for disease which the gene is involved, or as target molecules for gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              No.
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                           AlaLeuGluIleLeuThrAsnAlaThrGlnCysThrLeuLeuCysProProProArgLeu
                                                                                                    GlnAsnAsnAlaValLeuValAlaSerGlyGlyValAlaSerAsnPheTyrIleArgArg
                                                                                                                                                            HisLeuValLysArgThrHisArgAlaIleLeuPheCysLysGlnArgAspLeuLeuPro 140
                                                                                                                                                                                                                    GlyGlnIleLeuSerSerAlaAlaAspIleAlaAlaThrValGlnHisThrMetAlaCys
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CysThrAspAsnGlyIleMetIleAlaTrpAsnGlyIleGluArgLeuArgAlaGlyLeu
                                                                                      CAAAATAATGCAGTACTGGTTGCATCTGGTGGTGGTCGCAAGTAACTTCTGTATCCGCAGA
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Conservative: Mismatches: Indels:

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US-10-649-273-2\_COPY\_176\_414 (1-239)

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                                                   The invention relates to a novel method for detecting soft tissue sarcoma which comprises obtaining a first soft tissue sample from an individual and a normal soft tissue sample from the same or different individual, determining the expression of a gene in both samples and comparing the expression in the first soft tissue samples and comparing the presence of soft tissue sarcoma. The method of the invention has cytostatic applications and may be useful for detecting soft tissue sarcoma, possibly via gene therapy or vaccine production. The nucleic acid sequences may be useful in diagnostic and screening applications. The current sequence is that of a human soft tissue sarcoma-upregulated DNA of the invention. The current sequence is that of a human soft tissue sarcoms within the specification per se but was submitted in CD format by the inventor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Early detection of soft tissue sarcoma comprises determining expression of a gene in a first soft tissue sample and a normal soft tissue sample and comparing the gene expression, also useful in treating soft tissue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 2;
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                                                                                                                                                                                                                                                                                                                      osteopathic; antiarthritic; antirheumatic; cytostatic; hepatotropic; virucide; haemostatic; anti-HIV; antithyroid; thyromimetic; dermatological; antibacterial; fungicide; antiparasitic; anticonvulsant; thrombolytic; anticoagulant; anorectic; vasotropic; antiulcer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human diagnostic and therapeutic polynucleotide (dithp), SEQ ID No 100
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31-JUL-2003

Percent Similarity: Best Local Similarity:

1.4e-103 995.50 87.82% 87.82% 80.28%

Conservative: Mismatches: Matches:

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No.

Sequence 3358 BP;

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CC comprising a naturally occurring polynucleotide sequence at least 90% cc the dithp polynucleotide or its polynucleotide which is at least 90% cc the dithp polynucleotide or its polynucleotide which is at least 90% ct identical; or an RNA equivalent of any of the polynucleotides mentioned cabove. The dithp polynucleotides have the following activities: antiarteriosclerotic, immunosuppressive, neuroprotective, noctropic, neuroleptic, cranquilizer, osteopathic, antiarthritic, anti-HTV, anti-HTV, anti-Coural throminetic, cytostatic, chepatotropic, virucide, haemostatic, anti-HTV, anti-HTV, anti-Coural throminetic, cytostatic, chepatotropic, anti-Coagulant, anorectic, vasotropic, and antial-Coural throminetic, cytostatic, anti-Coagulant, anorectic, vasotropic, and antial-Coard throminetic, cytostatic, anti-Coard throminetic, cytostatic, cytostatic, anti-Coard throminetic, cytostatic, anti-Coard throminetic, cytostatic, anti-Coard throminetic, cytostatic, cytostatic, cytostatic, vasotropic, anti-Coard throminetic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, anti-Coard throminetic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic, cytostatic,
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Peralta CH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The invention relates to a novel isolated human diagnostic and therapeutic polynucleotide (designated dithp). The novel dithp polynucleotide comprises: any of 188 DNA sequences consisting of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of the comprise of
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16-JAN-2002; 2002US-0349384P
17-JAN-2002; 2002US-0349413P
17-JAN-2002; 2002US-0349946P
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                                                                                                                                                            Murine; mouse; protease; calcium activated neutral protease type 5; CAPN5; tryptase 4; sialoglycoprotease; enzyme; genetic disease; neurological; neuropsychological; psychotic illness; transgenic ani
                                                                                                                                                          CAPN5; tryptase 4; sialoglycoprotease; neurological; psycl
                 05-DEC-2001; 2001WO-US046405
                                                                                                                                                                                                                        Murine sialoglycoprotease-like gene sequence
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PR 06-DEC-2000; 2000US-0251803P.
PR 13-DEC-2000; 2000US-0251803P.
PR 13-DEC-2000; 2000US-025971P.
XX (DELT-) DELTAGEN INC.
XX Allen KD, Leviten MW;
XX Allen KD, Leviten MW;
XX PT; 2002-657389/70.
XX RPT; 2002-657389/70.
XX RPT; 2002-657389/70.
XX Refl for identifying agents that ameliorates a phenotype associated with a disruption in a protease target gene.
PT is useful for identifying agents that ameliorates a phenotype associated XX with a disruption in a protease target gene (PG) selected from calcium activated neutral protease type 5 (CAPNS) gene, tryptase 4 gene CC (II), comprising a disruption in a protease type 5 (CAPNS) gene, tryptase 4 gene CC (II), comprising a first polynuclectide sequence homologous to at least a first portion of PG, a second polynuclectide sequence homologous to at least a gene by introducing (II) into a cell, introducing the crimplanting the resulting blastocyst into a pseudopregnant mouse gives birth to a pseudopregnant cc gene, by introducing the crimplanting the resulting blastocyst into a pseudopregnant mouse comprising a disruption or function of GC and breeding the crimplanting the resulting blastocyst into a pseudopregnant cc of aprotease target gene, by administeric mouse to produce the transgenic mouse. (I) is useful for determining whether the expression or function of the disrupted procease carget gene in (I) is modulated. (I) is also useful for testing the efficacy of proposed genetic and pharmacological therapies for human cc genetic diseases, such as neurological, neuropsychological or psychotic companies. The present sequence represents murine slabolytoporotease-like gene by a squame to 17 and the present squame and the sample from the present invention of Squame entire slabolytoporotease-like gene by a squame to 17 and the present squame and the sample from the present invention of the disrupced procease and the squame to 17 and the squame to 17 and the squame to 17 and the squame to 17 and the squame to 17 and the squame to 17 and the squame to 17 and the squame t
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Pred. No. 1.28e-89 Length: 1572
Score: 870.00 Matches: 184
Percent Similarity: 82.77\$ Conservative: 13
Best Local Similarity: 77.31\$ Mismatches: 37
Query Match: 6 Gaps: 2
US-10-649-273-2\_COPY\_176\_414 (1-239) x ABQ75508 (1-1572)

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                                                                  LeuGlnHisValThrAspLysIleIleMetLysLysGluLysGluGluGlyIleGluLys
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GGGCAAATCCTGTCATCAGCTGCAGACATTGCTGCTGCGGTACAGCATGCAACAGCGTGC
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sequences. (I) is useful as hybridisation probes, polymerase chain reaction (PCR) primers, oligomers, and for chromosome and gene mapping, and in recombinant production of (II). The polymucleotides are also used in diagnostics as expressed sequence tags for identifying expressed genes. (I) is useful in gene therapy techniques to restore normal activity of (II) or to treat disease states involving (II). (II) is useful for generating antibodies against it, detecting or quantitating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess
                                                                                                                                                                                                                                                                                                   The invention relates to isolated polynucleotide (I) and polypeptide (II) sequences. (I) is useful as hybridisation probes, polymerase chain
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23-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; chromosome mapping; gene mapping; gene therapy; forensic; food supplement; medical imaging; diagnostic; genetic disorder; ss.
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                                                                                                                                                                                                                                                                                                                                                                                        Claim 1; SEQ ID NO 20426; 103pp; English.
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murine multipotent progenitor

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GCATGGAATGGAATTGAANGATTACGTGCNGNCTTNGGCNTTNTACNTGANNTAGAAGAC
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                                                                                                                                                                                                                        Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                    CC This invention relates to a novel method for predicting gene potential by CC associating nucleic acid sequences of unknown function with particular CC sub-population profiles. Specifically, it refers to classifying an CC unknown multi-lineage affillated gene by collecting hybridisation data to develop a gene expression map, in order to determine the discrete sub-CC population where it is expressed. The present invention describes methods CC for predicting the lineage commitment of genes associated with the self-CC renewing haematopoietic (blood) stem cells (HSCs), as well as the non-CC self renewing multipotent progenitors (MPPs), common lymphoid progenitors (CLPs) and common myeloid progenitors (CMPs), which are collectively CC referred to as bone marrow stem cells populations. As such, these methods CC can be used to identify associated multi-lineage affiliated genes and CC can be used to identify associated multi-lineage affiliated genes and CC development. This polymucleotide sequence is DNA associated with a murine CC MPP sub population of cells of the invention.
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Search completed: November 10, 2005, 17:34:22 Job time : 547.789 secs

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-Q=/cgn2_1/USPTO_spool_p/US10649273/runat_02112005_091338_15562/app_query.fasta_1.1429
-Q=/cgn2_1/USPTO_spool_p/US10649273/runat_02112005_091338_15562/app_query.fasta_1.1429
-DB=EST -QFMT=fastap -SUFFIX=p2n.rst -MINMATCH=0.1 -LOOPCT=0 -LOOPEXT=0
-UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi -LIST=45
-DCCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15 -MODE=LOCAL
-OUTEMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=2000000000
-USER=US10649273_GCGN_1 1_807G_@runat_02112005_091338_15562 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPELOCK=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
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### ALIGNMENTS

REFERENCE AUTHORS TITLE ACCESSION VERSION KEYWORDS SOURCE ORGANISM PEATURES COMMENT DEFINITION source AGENCOURT 7790948 NIH MGC 72 Homo 5', mRNA Sequence.
BQ423651
BQ423651.1 GI:21118966 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 870)

NIH-MCC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999) cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Plate: LLAM13342 row: l column: Email: cgapbs-r@mail.nih.gov Tissue Procurement: ATCC/DCTD/DTP Contact: Robert Strausberg, Ph.D. Homo sapiens Homo sapiens (human) quality sequence stop: ...
Location/Qualifiers /mol\_type="mRNA" /db\_xref="taxon:9606" j. .870 organism="Homo sapiens" 21 mRNA linear EST 23-MAY-2002 sapiens cDNA clone IMAGE:6065828 å

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640 bp mRNA linear EST 15-JUL-2-hd03d11.yl Human Retina cDNA (Un-normalized, unamplified): hd/he Homo sapiens cDNA clone hd03d11 5', mRNA sequence.
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/lab_host="DH10B (phage-resistant)"
/clone lib="NNH MGC 72"
/note="Togan: skin; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: SalI; Cloned unidirectionally. Primer: Oligo of Average insert size 2 kb. Library constructed by Life Technologies."
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: graeme@helix.nih.gov
Plate: 03 row: d column: 11
Seq primer: M13RP1 reverse primer
Location/Qualifiers
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6/331, NIH, Bethesda, MD 20892-2740,
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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Fax: 301 496 0078
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="Organ: Bye; Vector: pSPORT1; Neural retina tissue was dissected from two 80 year old donors with no observed eye disease. 100ug of total RNA was used for library construction. A directionally cloned cDNA library in the pSPORT1 vector (Life Technologies) was constructed at Bioserve Biotechnology (Laurel MD) essentially following the protocols of the SuperScript Plasmid System full details of which are contained in the manufacturer's Instruction manual (http://www.lifetech.com/). First
                                                                                                                                                                                                                                                                                                                                                                                                                             primer-adapter [5'-pGACTAGATCGCCGAGCCGCCCC(T)15-3']. EST analysis [5'-pGACTAGTTCTAGATCGCCGAGCGGCCCCCC(T)15-3']. EST analysis was performed on the unamplified library at the NIH Intramural Sequencing Center (NISC)."
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/dev_stage="Adult"
/lab_host="EMDH10B"
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                                        Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Pujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, B., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayshizaki, Y. RIKEN integrated sequence analysis (RISA) system-384-format sequence res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Itoh,M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genome Res. 10 (10), 1617-1630 (2000)
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                         Genome Res.
20530913
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High-efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cDNA library was prepared and sequenced in Mouse Genome
Encyclopedia Project of Genome Exploration Research Grou
Genomic Sciences Center and Genome Science Laboratory in
Division of Experimental Animal Research in Riken contri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Exploration Research Group, RIKEN Genomic Sciences Center RIKEN Yokohama Institute; 1-7-22 Suehiro-Cho, Tsurumi-ku, 1 Kanagawa 300-0045, Japan (E-mail:genome-res@gsc.riken.jp, URL:http://genome.gsc.riken.jp/, Tel:81-45-503-9222, Fax:81-45-503-9216)
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Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   URL:http://genome.gsc.riken.jp/
URL:http://fantom.gsc.riken.jp/.
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Please visit our web site for further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (16-JUL-2001) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome
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6 (bases 1 to 2284)
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                                                                                                                                                                                                                     /translation="MLMLRRTAGAIPKPPKSKVYGFLRRFSVHPRTLSCHKLVLGIET
SCDDTGAAVVDETGNVLGEALHSQTQVHLKTGGIVPPVAQQLHRENIQRIVESTLSAK
RITESDLSAIATTIKFGLALSLGVELSFSLQLVNQFKKPPIPHHMEBALTIRLTNK
VEFPPLVLLISGGHCLLALVQGVSDFLLLGKSLDIAPGDMLDKVARRLSLIKHPECST
                                                                                                                                                                                                                                                                                                                                                                                       sapiens] (SPTR Q9H4B0, match=1242) "
                                                                                                                                                                                                                                                                                                                                                                                                                      /note="unnamed protein product; putative similar to PUTATIVE SIALOGLYCOPROTEASE TYPE 2 sapiens] (SPTR|Q9H4B0, evidence: FASTY, 80%ID,
                                                                                                                         GVDISREVABAAIKVPRLKMAL"
                                                                                                                                                                     MSGGKA I EQLAKDGNR FHFT I NPPMQNAKNCDFS FTGLQH I TDKL I THKEKEBG I EKG
QI LSSAAD I AAAVQHATACHLAKRTHRA I LFCKQKNLLS PANAVLVVSGGVASNL Y I R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tissue type="corpora quadrigemina"
/clone Tib="RIKEN full-length enriched
/dev stage="adult"
221. 1465
                                                                                                                                                   KALBI VANATQCTLLCPPPRLCTDNGIMI AWNGI BRLRAGLGVLHDVEDI RYBPKCPI
                                                                                                                                                                                                                                                                                                                     /codon_start=1
/protein_id="BAC32450.1"
/db_xref="GI:26337529"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /mol_type="mRNA"
/strain="C57BL/6J"
/strain="C57BL/6J"
/db_xref="FANTOM DB: B230219017"
/db_xref="taxon: 10090"
/clone="B230219017"
                                                                       /note="putative"
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                                                                                                                                                 AKO11265 HTC 03 APR-2004 MRNA linear HTC 03 APR-2004 Mus musculus 10 days embryo whole body cDNA, RIKEN full-length enriched library, clone:2610001M19 product:similar to PUTATIVE SIBLOGLYCOPROTEASE TYPE 2 [Homo sapiens], full insert sequence.
                  Mammalia;
                  Eukaryota; Metazoa;
Mammalia; Eutheria;
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L Nature 420, 563-573 (2002)

B 6 (bases 1 to 1622)

B Adachi, J., Aizawa, K., Akahira, S., Akimura, T., Arai, A., Aono, H., Arakawa, T., Bono, H., Carninci, P., Fukuda, S., Fukunishi, Y., Furuno, M., Hanagaki, T., Hara, A., Hayatsu, N., Hiramoto, K., Furuno, M., Hanagaki, T., Hara, A., Hayatsu, N., Licawa, M., Kasukawa, T., Kato, H., Kawai, J., Kojima, Y., Konno, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Okazaki, Y., Okido, T., Owa, C., Saito, H., Saito, R., Sakai, C., Sakai, K., Sano, H., Sasaki, D., Shibata, K., Shibata, Y., Shibata, Y., Shibata, Y., Shibata, Y., Shibata, Y., Tagama, A., Takahashi, F., Tanaka, T., Yeshino, M., Muramatsu, M. and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                         Direct Submission
Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute of Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama RIKEN Yokohama (E-mail:genome-res@gsc.riken.jp, URL:http://genome.gsc.riken.jp/, Tel:81-45-503-9222, Pax:81-45-503-9216)
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                                  Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Itoh,M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new Genome Res. 10 (10), 1617-1630 (2000)
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                      GlnAsnAsnAlaValLeuValAlaSerGlyGlyValAlaSerAsnPheTyrIleArgArg 160
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SCDDTGAAVVDETGNVLGEALHSQTQVHLKTGGIVPPVAQQLHRENIQRIVEETLSAC
RITPSDLSAIATTIKPGLALSLGVGLSFSLQLVNGPKKPFIPHHMEAHALTIRLTNK
VEFPFLVLLISGGHCLLALVQGVSDFLLLGKSLDIAPGDHLDKVARRLSLIKHPECST
MSGKAIEQLAXDGNRFHFTINPPMQNAKNCDFSFTGLQHITDKLITHKEKEBGIEKE
QILSSAADIAAAVQHATACHLAKRTHRAILFCKQKVLLSPANAVLVVSGGVASNLYIR
KALEIVANATQCTLLCPPPRLCTDNGIMIAMNGIERLKAGLGVLHDVEDIRYEPKCPL
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/clone_lib="RIKEN full-length enriched mouse cDNA library"
/dev stage="10 days embryo"
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/db_xref="GI:12847276"
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/organism="Mus musculus"
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Full-length cDNA libraries and normalization
Unpublished (2001)
Unpublished (2001)
Con May 13, 2003 this sequence version replaced gi:30611736.
Contact: Genoscope
Genoscope - Centre National de Sequencage
2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex - FRANCE
Email: seqref@genoscope.cns.ff, Web: www.genoscope.cns.fr
1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and Cloned into the Not I and EcoR V sites of the pCMVSPRT 6 vector. Library was normalized. Library was constructed by Life Technologies, a division of Invitrogen. This sequence belongs to sequence cluster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1212
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181 CysThrAspAsnGlyIleMetIleAlaTrpAsnGlyIleGluArgLeuArgAlaGlyLeu 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         161 AlaLeuGluIleLeuThrAsnAlaThrGlnCysThrLeuLeuCysProProProArgLeu 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BX391919 Homo sapiens HELA CELLS COT 25-NORMALIZED Homo CDNA Clone CSODKOO1YEO2 3-PRIME, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 852)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BX391919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            For more information about this cluster, see http://www.genoscope.cns.fr/cdna?s=CSOBAIO35ZEO7_CSO3317_1&c=1240.r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCCGTTTTACATGATGTAGAAGACATCCGATATGAACCAAAATGTCCTCTTGGAGTAGAC 1391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGCACTGACAATGGCATCATGATTGCATGGAATGGAATTGAAAGATTACGTGCTGGCTTG 1331
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/cell_line="HELA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
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  x BX391919
                                                                  Matches:
Conservative:
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    (1-852)
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sapiens
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DEFINITION
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RS Strausberg, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,
Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,
Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,
Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,
McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,
Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.M.,
Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,
Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,
Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,
Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,
Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,
Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E.,
Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                             human and mouse cDNA sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BC030671.1 GI:21040459
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CATCTTGTGAAAAGAACACATCGGGCTATTCTGTTTTGTAAGCAGAGAGACTTGTTACCT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AlaProGlyAspMetLeuAspLysValAlaArgArgLeuSerLeuIleLysHisProGlu
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                     (bases 1 to 1609)
                                                                                        Natl. Acad. Sci.
                                                                                    U.S.A. 99 (26), 16899-16903
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Best Local Similari
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score:
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JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
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                                                                                                                                                                                                                                                                                                                                                                                                           41
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                                                                                                                                                                                                                           81
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Tissue Procurement: Marcello Bento Soares, Ph.D.
CDNA Library Preparation: M. Bento Soares, University
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LL
DNA Sequencing by: Institute for Systems Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Direct Submission
Submitted (20-MAY-2002) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Series: IRAK Plate: 66 Row: e Column: 10
This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 21312463
This clone has the following problem: frame shifted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Clone distribution: MGC clone distribution through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NIH-MGC Project URL: http://mgc.nci.nih.
HisteuValLysArgThrHisArgAlaIleLeuPheCysLysGlnArgAspLeuLeuPro 140
                                                                                        GlyGlnIleLeuSerSerAlaAlaAspIleAlaAlaThrValGlnHisThrMetAlaCys 120
                                                                                                                                                                                                           LeuGlnHisValThrAspLysIleIleMetLysLysGluLysGluGluGlyIleGluLys 100
                                                                                                                                                                                                                                                                                                    HisPheAspIleLysProProLeuHisHisAlaLysAsnCysAspPheSerPheThrGly
                                                                                                                                                                                                                                                                                                                                                                 TGTTCTACAATGAGTGGTGGAAAAGCTATAGAACAGTTGGCCAAAGACGGAAATAGATTC
                                                                                                                                                                                                                                                                                                                                                                                           CysSerThrMetSerGlyGlyLysAlaIleGluHisLeuAlaLysGlnGlyAsnArgPhe 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LeuLeuAlaLeuValGlnGlyValSerAspPheLeuLeuLeuGlyLysSerLeuAspIle
                                                                                                                                                                                 1. .1609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /tissue_type="Thymus gland, mous
/clone_lib="Soares_thymus_2NbMT"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       organism="Mus musculus"/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xref="taxon:10090"
/clone="IMAGE:1226118"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            note="Vector: pT7T3-Pac"
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Matches:
Conservative:
Mismatches:
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12
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REFERENCE AUTHORS

KEYWORDS SOURCE

ACCESSION

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RESULT 6 BC030671

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PUBMED REFERENCE

AUTHORS

JOURNAL MEDLINE

TITLE

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Percent Similarity:
Best Local Similarity:
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High quality sequence stop: 701.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Robert Strausberg, Ph. Email: cgapbs-r@mail.nih.gov Tissue Procurement: DCTD/DTP
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NIH-MGC http://mgc.nci.nih.gov/
National Institutes of Health,
Unpublished (1999)
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Mammalia; Eutheria;
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Smith, T. P. L., Freking, B. A., Ford, J. J., Vallet, J. L., Fox, J., Wise, T. A., Nonneman, D. J., Wray, J. E. and Keele, J. W. A second set of porcine ESTs from a pooled-tissue normalize.
                                                                                                       Tel: 402 762 4366
Fax: 402 762 4390
Email: smith@email.marc.usda.gov
Single pass sequencing. Bases called
trimmed with the aid of the trim_alt
                                                                                                                                                                                                                       Unpublished (2003)
Contact: Smith TPL
USDA, ARS, US Meat Animal
PO Box 166, Clay Center, N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EST.
Sus scrofa (pig)
Sus scrofa
                    cross_match vo.990329.
Plate: SRG8015 row: H column:
Seq primer: TAGAAGGCACAGTCGAGG.
Location/Qualifiers
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                                                  sequence.
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              Bos
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              taurus
                          taurus
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/mol_type="mRNA"
/db_xref="taxon:9823"
/tissue_type="pooled"
/lab_host="DH10B"
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/note="Vector: pcDNA3.1; Site 1: EcoRI; Site 2: NotI;
Library made with RNA pooled from multiple tIssues
including brain, liver, muscle, placenta/endometrium,
ovary, testes, and bone marrow."
Metazoa;
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Chordata; Craniata; Vertebrata;
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Query Match:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Tad S. Sonstegard
Bovine Functional Genomics Laboratory
Animal and Natural Resources Institute
Bd1g. 200 Rm2A BARC-East, Beltsville, MD
Tel: 3015048416
Fax: 3015048414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Single pass sequencing. Bases called an 0.000925 using options -trim_alt " -tri by cross match using options -minmatch plate: 12 row: F column: 24
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Sonstegard, T.S., Van Tassell, C.P., Matukumal
G.P., Bosak, S., Rubenfield, M. and Gasbarre,
Production of EST from cDNA libraries derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Seq primer: AGCGGATAACAATTTCACACAGG
High quality sequence stop: 637.
Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: tads@anri.barc.usda.gov
                                                                                                                                                                                                           LysGluGluGlyIleGluLysGlyGlnIleLeuSerSerAlaAlaAspIleAlaAlaThr 113
||||||||||||||
|AAAGAGGAAGGTATCGAGCAGGGCAGGTCCTGTCTTCAGCTGCAGACATTGCTGTTGCG 453
AAGCAGAGAGGCTTCTTACGTCAGAGTAACGCAGTACTGGTTGTATCTGGAGGCGTCGCA
                                                                            LysGlnArgAspLeuLeuProGlnAsnAsnAlaValLeuValAlaSerGlyGlyValAla
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /tissue_type="Pooled"
/dev stage="Multiple"
/lab_host="DH108 TI phage resistant"
/clone_lib="BARC 1080V"
/clone_lib="BARC 1080V"
/clone_Torgan: Small Intestine; Vector: pAgen-1; Site_1:
/coRV; Site_2: NotI; Equimolar amounts of mRNA extracted
from proximal jejunums of 18 and 21 wk old steers, and
distal ileums of 14 day old calves. proximal jejunum
exposed to C. oncophora for 3 and 6 weeks, and distal
ileum exposed to C. parvum for 7 days"
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/clone="10BOV12_F24"
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/strain="Holstein"
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AGENCOURT_8863711 NIH_MGC_18
5', mRNA sequence.
BQ961028
BQ961028.1 GI:22376506
EST.
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cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLCM2603 row: d column: 15
High quality sequence stop: 584.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 922)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: cgapbs-r@mail.nih.gov
Tissue Procurement: DCTD/DTP/Gazdar
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799.00
88.04%
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Animal Genetics Division
Shirakawa Institute of Animal Genetics
Odakura, Nishigo, Nishi-shirakawa, Fukushima 961-8061, Japan
Tel: 81-248-25-5641
Fax: 81-248-25-5725
                                                                                                                                                                                                           and Sugimoto, Y.

Betablishment of a high throughput E poly(A) tail-removed cDNA libraries
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Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
Bovinae; Bos.
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                                                                                                            Contact: Yoshikazu Sugimoto
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                                                                                                                                                                                                                                                                              Hirotsune,S.,
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cDNA clone E1KI013A07

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Suzuki,H.,

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/clone="ElK1013A07"
/tissue_type="kidney"
/dev_stage="fetus"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone_lib="Bos taurus kidney fetus"
/note="Vector: pZL1; Site_1: Sal1; Site_2:
was deleted from a Not1 site"
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/mol_type="mRNA"
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2024 University of I
Tel: 319 356 4866
Fax: 319 356 7171
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Tissue Procurement: Dr. M. J. Welsh, University of Iowa
cDNA Library preparation: Dr. M. Bento Soares, University of Iowa
cDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: Researchers may obtain clones from Research
Genetics (www.resgen.com) or from Open Biosystems
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Seq primer: M13 FORWARD
POLYA=No.
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Bonaldo, M.F., Lenno
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae
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AlaIleLeuPheCysLysGlnArgAspLeuLeuProGlnAsnAsnAlaValLeuValAla
                                                                                     AspIleAlaAlaThrValGlnHisThrMetAlaCysHisLeuValLysArgThrHisArg 128
                                                                                                                                               ATAATGAAAAAGGAAAAAAGGGAAGGTATTGAGAAGGGGCAAATCCTGTCTTCAGCAGCA
                                                                                                                                                                  GACATTGCTGCCACAGTACAGCACACAATGGCATGTCATCTTGTGAAAAAGAACACATCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /tissue type="Human Lung Epithelial cells"
/lab host="DHIOB (Life Technologies) (T1 phage resistant)
/clone_lib="UI-CF-FNO"
/clone_lib="UI-CF-FNO"
/note="organ: Lung; Vector: pT773-Pac (Pharmacia) with a modified polylinker; Site_1: BcoR I; Site_2: Not I; UI-CF-FNO is a subtracted cDNA library derived from two normalized Human lung epithelial cell libraries (EN1 and DUI) The library was subtracted according to according to Bonaldo, Lennon and Soares, Genome Research, 6:791-806,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  bento-soares@uiowa.edu
TAG_SEQ=None found"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bonaldo, Lennon and Soares, Genome Researc 1996. For additional information, contact:
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Wittzell, H., Bed'Hom, B., Morin, V., Young, J.R., Whittaker, C.J., Chausse, A.M. and Zoorob, R.
A collection of chicken ESTs from activated immune cells Unpublished (2003)
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Gallus gallus
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                                                                                          CysSerThrMetSerGlyGlyLysAlaIleGluHisLeuAlaLysGlnGlyAsnArgPhe
                                       rue Guy Moquet, BP 8, 94
el: 33 1 49 58 35 00
ax: 33 1 49 58 33 81
mail: zoorob@vjf.cnrs.fr.
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/clone_lib="PHA-activated
/note="Vector: pTriplEX2"
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/mol_type="mRNA"
/db_xref="taxon:9031"
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Boardman, P.E., Sanz-Ezquerro, J., Overton, I.M., I
Fong, W.T., Tickle, C., Brown, W.R.A., Wilson, S.A.
A Comprehensive Collection of Chicken cDNAs
Corr. Biol. 12 (22), 1965-1969 (2002)
                                                                                                                                                             Department of Biomolecular Sciences University of Manchester Institute
                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae; Gallus.
                                                                                                                                                                                                                                                                                                                                     Gallus gallus (chicken)
Gallus gallus
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603114407F1 CSEQCHL20 Gallus
                                                                                                                      PO Box 88, Manchester, Tel: 01612008930
                                                                                                                                                                                       Contact: Simon Hubbard
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                                                                                                           01612360409
                                                                             Simon.Hubbard@umist.ac.uk
Location/Qualifiers
            /organism="Gallus gallus"
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/strain="White Leghorn, H
/db_xref="taxon:9031"
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DB:
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              IleSerLysGluValGlyGluAlaSerIleLysValProGlnLeuLys 236
                                                                    GlyIleLeuHisAspIleGluGlyIleArgTyrGluProLysCysProLeuGlyValAsp
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/lab_host="DH10B"
/clone_lib="CSEQCHL20"
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Tissue Procurement: Howard Jacobs
cDNA Library Preparation: Express Genomics
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             National Cancer Institute / NIH
Bldg. 31 Rm10A07 Bethesda, MD 20892
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NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
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High quality sequence stop: 736.
Location/Qualifiers
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  ThrValGlnHisThrMetAlaCysHisLeuValLysArgThrHisArgAlaIleLeuPhe
                                               GAAAAAGAAGAAGGCATTGAGAAGGGGCAAATCCTGTCATCAGCCGCAGACATTGCTGCT
                                                                       GluLysGluGluGlyIleGluLysGlyGlnIleLeuSerSerAlaAlaAspIleAlaAla 112
                                                                                                                                                               AsnCysAspPheSerPheThrGlyLeuGlnHisValThrAspLysIleIleMetLysLys
                                                                                                                                          AACTGTGATTTTTTTTTTTTACGGGACTTCAACATGTCACCGATAAGCTAATAACACACAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /colone libb "NIH MGC 231"
/colone libb "NIH MGC 231"
/note="Organ: lung; Vector: pExpress-1; Site 1: EcoRV;
/note="Organ: lung; Vector: peopled lung Tissue from a Site 2: Not1; RNA obtained from pooled lung Tissues were site of male and female animals at 8 wk old. Tissues were snap-frozen and kept at -80C for two days before RNA extraction and purification (Tri-reagent method). cDNA was primed using oligo-dT primer:
5'-pbACTACTTCTACATCGCCAGCGCCGCCC(T)25-3' and cloned into the EcoRV/Not1 sites of pExpress-1. Size-selection >1.4kb resulted in an average insert size of 2.3 kb. This primary library is not normalized (normalized primary library is NIH MGC 232) and was constructed by Express Genomics (Frederick, MD). Note: this is a NIH MGC library."
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/lab_host="DH10B TonA"
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/db_xref="taxon:10116"
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	Search completed: November 11, 2005, 02:14:17 Job time : 3392.57 secs	Search compl Job time : 3	r
	481 CCACGATTAAAAATGACACTT 501	Db 48	_
	233 ProGlnLeuLysMetGluIle 239	Оу 2:	_
480	CCAAAATGTCCTCTCGGAATAGACATATCCAGAGAAGTTGCAGAAGCTGCCATAAAAGTA	Db 421	_
232	ProLysCysProLeuGlyValAspIleSerLysGluValGlyGluAlaSerIleLysVal	Оу 213	_
420	ATTGAAAGATTACGTGCTGGCTTGGGCATTTTACATGATGTAGAAGACATCCGATACGAA	Db 361	_
212		07 19	_
360	301 TTGTTGTGCCCCCCCCGAGACTGTGCACTGACAATGGTATCATGATTGCATGGAATGGA	Db 3(	_
192	173 LeuLeuCysProProArgLeuCysThrAspAsnGlyIleMetIleAlaTrpAsnGly 192	Qy 1:	_
300	241 GCAAGTAACTTGTACATCCGAAGAGCATTGGAAATTGTAGCAAATGCAACACAATGCACT	Db 2,	_
172	AlaSerAsnPheTyrIleArgArgAlaLeuGluIl	0у 153	_
240	181 TGCCAGCAGAAAAATTTGCTATCTCCAGCTAACGCAGTATTAGTTGTGTCTGGAGGTGTT	Db 18	
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180	121 GCGGTACAGCACGCAACAGCGTGCCACCTTGCGAAAAGAACACATCGTGCTATTCTGTTT 180	Db 1:	_

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Listing first 45 summaries
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-Q=/Cgn2 1/USPTO_spool_p/US10649273/runat_02112005_091339_15581/app_query.fasta_1.1429
-DB=Issued_Patents_NA -QPMT=fastap_-SUFFIX=p2n.rni-mINNATCH=0.1 -LOOPCL=0
-LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi
-LIST=45 -DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15
-MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=2000000000
-USER=US10649273_@CGN 1 1 177 @runat 02112005 091339 15581 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WALT -DSPELOCK=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
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-MODEL=frame+_p2n.model -DEV=xlp
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Match Length DB
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1: /cgn2_6/ptodata/1/ina/5A_COMB.seq:*
2: /cgn2_6/ptodata/1/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/1/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/1/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
6: /cgn2_6/ptodata/1/ina/backfiles1.seq:*
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US-09-596-002-38
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Sequence 38, Appl
Sequence 806, App
Sequence 801, App
Sequence 801, Appl
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11.7	12.9	13.5	13.7	13.7	14.0	14.0	14.1	14.1	14.3	14.4	14.6	14.6	14.6	14.7	14.7	14.8	15.0	15.0	15.0	15.0	15.0	15.0		15.2	15.2	15.3	15.3	15.9	16.1	16.5	17.1	17.9
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## ALIGNMENTS

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; TILLS OF ANY OF THE REFERENCE: 802
; CURRENT APPLICATION NUMBER: US/09/774,528
; CURRENT APPLICATION NUMBER: US/09/774,528
; CURRENT FILING DATE: 2001-01-30
NUMBER OF SEQ ID NOS: 441
; SOFTMARE: pt FL_genes Version 2.0
SEQ ID NO 177
; LENGTH: 1416
; TYPE: DNA
; ORGANISM: Homo sapiens
; PEATURE:
; NAME/KEY: CDS
; LOCATION: (205)..(1305)
US-09-774-528-177
Alignment Scores:
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US-09-774-528-177
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APPLICANT:
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APPLICANT:
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TITLE OF INVENTION: No. 6743619el Nucleic Acids and
TITLE OF INVENTION: Polypeptides
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Zhao, Qing A.
Yang, Yonghong
Xue, Aidong J.
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Zhou, Ping
Zhou, Ryle
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Wang, Dunrui
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Asundi, Vinod
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                                                                                                                                       US-10-067-443-23
                                                                                                                                                  RESULT
Sequence 23, Application US/10067443

Patent No. 6642041

GENERAL INFORMATION:

APPLICANT: Bristol-Myers Squibb Company

TITLE OF INVENTION: POLYNUCLECTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED

TITLE OF INVENTION: SPINAL CORD, MP-1

FILE REFERENCE: DO073 NP

CURRENT APPLICATION NUMBER: US/10/067,443

CURRENT FILING DATE: 2002-02-05

PRIOR APPLICATION NUMBER: US 60/266,518

PRIOR APPLICATION NUMBER: US 60/282,814

PRIOR FILING DATE: 2001-04-10

NUMBER OF SEQ ID NOS: 71
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  Sequence 1, Application US/10067443
PATENT NO. 6642041
GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING
TITLE OF INVENTION: SPINAL CORD, MP-1
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US-10-649-273-2_COPY_176_414 (1-239)
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Best Local Similarity:
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SEQ ID NO 23
LENGTH: 1526
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                                                             GlyIleLeuHisAspIleGluGlyIleArgTyrGluProLysCysProLeuGlyValAsp
                                                                                                          CysThrAspAsnGlyIleMetIleAlaTrpAsnGlyIleGluArgLeuArgAlaGlyLeu
                                                                                                                                              GCTCTGGAAATTTTAACAAACGCAACACAGTGCACTTTGTTGTGTCCTCCTCCCAGACTA
                                                                                                                                                          AlaLeuGluIleLeuThrAsnAlaThrGlnCysThrLeuLeuCysProProProArgLeu
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METALOPROTEASE

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FILE REFERENCE: D0073 NP
CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOFTWARE: PatentIn version 3.0
SEQ ID NO 1
LENGTH: 2197
TYPE: DNA
ORGANISM: Homo sapiens
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LOCATION: (231)..(1472)
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                                                                                 TGCACTGATAATGGCATTATGATTGCATGGAATGGTATTGAAAGACTACGTGCTGGCTTG
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APPLICANT: Bristol-Myers Squibb Company
APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED
TITLE OF INVENTION: SPINAL CORD, MP-1
FILE REFERENCE: D0073 NP
CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT APPLICATION NUMBER: US 60/266,518
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
NUMBER OF SEQ ID NOS: 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn version 3.0 SEQ ID NO 21
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Patent No. 664204
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                          ArgaspleuleuProGlnasnAsnAlaValLeuValAlaSerGlyGlyValAlaSerAsn 155
                                                                                CACACAATGGCATGTCATCTTGTGAAAAGAACACATCGGGCTATTCTGTTTTGTAAGCAG
                                                                                                 HisThrMetAlaCysHisLeuValLysArgThrHisArgAlaIleLeuPheCysLysGln 135
 PheTyrIleArgArgAlaLeuGluIleLeuThrAsnAlaThrGlnCysThrLeuLeuCys 175
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103 eLeuSerSerAlaAlaAspIleAlaAlaThrValGlnHisThrMetAlaCysHisLeuVa 123	97	Qy 89 IleMetLySLySGluClu	Db 11960 CATCATGCTAAAAATTGTGATTTTCTTTTACTGGACTTCAACACGTTACTGATAAAATA 12019	69 HisHisAlaLysAsnCysAspPheSerPheThrGlyLeuGlnHisValThrAspLysIle 88	Cy ** 7.164.169.1411111111111111111111111111111	מו מוסיס שונישו ביינים ווישין ביינים ווישין ביינים	29 ValAlaArgArgLeuSerLeuillelysHisProGluCysSerThrMetSerGlyClyLys	-10-649-2/3-2_COEI_1/6_414 (1-239) X US-10-06/-443-20 (1-14364)	4	Indels:	milarity: 32.86% Conservation	Length:	00-10 007-111-20	1	; LENGTH: 14364	SOFTWARE: PatentIn version 3.0	PRIOR FILING DATE: 2001-04-10  NUMBER OF SEO IN NOS: 71	PRIOR FILING DATE: 2001-02-05  DETOR ADDITINGTION NUMBER: US 60/287 814	CURRENT FILING DATE: 2002-02-05 CURRENT FILING DATE: 2002-02-05 DATOS RODITONTON NUMBER. HE 60/266 519	FILE REFERENCE: D0073 NP	; APPLICANT: Bristol-Myers Squibb Company ; TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRESSED I	; Patent No. 6642041 ; GENERAL INFORMATION:	US-10-067-443-20; Application US/10067443	RESULT 5	Db 1329 AAAATGGAGATA 1340	Qy 236 LysMetGluIle 239	Db 1269 CCTCTTGGAGTAGACATATCAAAAGAAGTTGGAGAAGCTTCCATAAAAGTTACCACAATTA 1328	Qy 216 ProLeuGlyValAspIleSerLysGluValGlyGluAlaSerIleLysValProGlnLeu 235	Db 1209 CTACGTGGTGGCATTTTACATGACATAGAAGGCATCCGCTATGAAACCAAAATGT 1268	argariozgiilozgiizangringinilozgiinararangringinilozgiinozgiinozgiinozgiinozgiinozgiinozgiinozgiinozgiinozgiino	Qy 176 ProProProArgLeuCysThrAspAsnGlyIleMetIleAlaTrpAsnGlyIleGluArg 195	Db 1089 TTCTATATCCGCAGAGCTCTGGAAATTTTAACAAACGCAACACGTGCACTTTGTTGTGT 1148
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151	147ValAlaSerGlyGl 151	13100 GGGATAGTTTATTATTGTTTAATGCTGATATTTTTCTCCAGGTTTAATTAGCAGCTTGGT 13159	13040 TTTTTCTTTCCAAATTTTTATTACATAGATATGTCATCTGCCCATTACCCATCTCAAAAT 13099 146 146	146 146	12980 TGGAAGAAATATACAAAAATGCTAGTAATGTTTGTATGCTATTAGAATTATTAGTAATT 13039	146 146	12920 AGGGTCTAAAATAGTGTACTATGATTGAAATTATATTAAATAAA	146 146	12860 ATATCAAAGAATAATTTTTTCAGAGTTATGTAGTAAAATGCACAAAATAATAAAAATTTC 12919	146 146	12800 TATAAACTAAAGTGGGAAAATGTTTAAATGGTAGTAATTCATAGATGGAATTTTACATGG 12859	146 146	12740 CTTAAAAGCCTTGACAAACATCCTGTTTAACTGTATCTTAAACTTTATTCATTTAAAAAT 12799	146 146	12680 AATGTTGATAAAGTTCTGATAATCCACTATATTGTACCAGCCAAAATCCCTTTAATTGTG 12739	146 146	12620 TTTTTTAATAAGCCAGTCAAATTTAGCAGTGGGAGGTGGTATTCCAACTTTCGTGACACT 12679	146 146	12560 ATTTTTAGAAAAATAGGTGGATTTCCTTCATCCTTTGATGAAATCCCTTTGTTTG	146 146	12500 CTTGTTGGATTTAAAAGAGGGCTTACAATÀAAGAAAGTAAATGCAGTAACTGCTATCACT 12559	146 146	12440 TGGTAGCTTTATGGGACAGCTGTATAGCTTCTATGGCACATAAGTCTAATTTTGCATCTT 12499	146 146	12380 CCCTGACAGTATGAAATTATGCAGGATAGGAAAGACTAACAGCCATTTCTTGTACTAGTT 12439	146 146	12320 TTTTTTCCCAAGACCTTGACCTTGTGTTTAGGATGAACAGATCTTTATGCCTTATGCTAG 12379	146 146	TAAGTTTTATCTCATTTTATAGTAATAGTTACACTTTGCAATATGTTAC	1 AU a 1	123 llysargfhrHisargalaileLeuPheCysLysGlnArgAspLeuLeuProGlnAsnAs 143	

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GENERAL INFORMATION:
APPLICANT: Lagace, Robert, E.
APPLICANT: Patterson, Chandra
APPLICANT: Berg, Kim, L.
TITLE OF INVENTION: NUCLEOTIDE SEQUENCES OF
FILE REFERENCE: PM-0008-4 US
CURRENT APPLICATION NUMBER: US/09/596,002
CURRENT FILING DATE: 2000-06-16
PRIOR APPLICATION NUMBER: 60/140,121
PRIOR FILING DATE: 1999-06-18
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LENGTH: 94750
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                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: misc_feature
OTHER INFORMATION: Incyte template ID No. 6632636
PUBLICATION INFORMATION:
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ORGANISM: M. catarrhalis
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24464 GCCTATGAGCTGCCAAGACCCATGCAGCAT---AAAGGGCTGGATTTTTTCGTTCAGTGGC
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                                                                                     CysSerThrMetSerGlyGlyLysAlaIleGluHisLeuAlaLysGlnGlyAsnArgPhe
                                                                                                                                                                  AlaProGlyAspMetLeuAspLysValAlaArgArgLeuSerLeuIleLysHisProGlu
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                                                                                                                                    GCGGTGGGTGAATGCTTTGATAAAACGGCAAAAATGCTCAAACTG---CCCTATCCT---
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APPLICANT: GATY L. Breton et al.
APPLICANT: GATY L. Breton et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO MORAXELLA CATAR
TITLE OF INVENTION: FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 2709.2005-001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 806
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CURRENT FILING DATE: 2000-04-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQ ID NOS: 3840
                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA ORGANISM: M.catarrhalis
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                                CysSerThrMetSerGlyGlyLysAlaIleGluHisLeuAlaLysGlnGlyAsnArgPhe
                                                                         GCGGTGGGCGAATGCTTTGATAAAACGGCAAAAATGCTCAAACTG----CCCTATCCT---
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US-09-252-991A-884/c
; Sequence 884, Application US/09252991A
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                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 884
LENGTH: 1059
TYPE: DNA
ORGANISM: Pseudomonas aeruginosa
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APPLICANT: Marc J. Rubenfield et al.
APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR FILING DATE: 1998-02-18
PRIOR FILING DATE: 1998-02-18
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
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                                          621 TTGGTGCGGGTGGACGGTATCGGCCGCTACCAGTTGCTTGGCGAATCGGTGGACGATGCC 562
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ProGlyAspMetLeuAspLysValAlaArgArgLeuSerLeuIleLysHisProGluCys
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                                                      US-10-649-273-2_COPY_176_414 (1-239)
                                                                                                                                                                                                      Alignment Scores:
                                                                                                                                                                                       Pred. No.:
                                                                                                                                                                                                                                                                                           SEQ ID NO 801
LENGTH: 1206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 801, Application US/09252991A Patent No. 6551795
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/252,991A CURRENT FILING DATE: 1999-02-18 PRIOR APPLICATION NUMBER: US 60/074,788 PRIOR FILING DATE: 1998-02-18 PRIOR APPLICATION NUMBER: US 60/094,190 PRIOR FILING DATE: 1998-07-27 NUMBER OF SEQ ID NOS: 33142
                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: MARC J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
                                                                                                                                                                                                                                                         ORGANISM: Pseudomonas aeruginosa
                                                                                                                                                                                                                                                                            TYPE: DNA
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US-09-557-884-1/c
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Patent No. 6506581
GENERAL INFORMATION:
APPLICANT: Fleischmann et al.
             COMPUTER READABLE FORM:
MEDIUM TYPE: 3 1/2 inch diskette
COMPUTER: Dell Pentium
OPERATING SYSTEM: MS DOS v6.22
SOFTWARE: ASCII Text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/557,884
FILING DATE: 25-Apr-2000
CLASSIFICATION: «Unknown»
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/476,102
PILING DATE: JUN-5-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
ADDRESSEE: Human Genome ScientsTreET: 9410 Key West Avenue
                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: The Nucleotide sequence of the Haemophilus influenzae Thereof, and Uses Thereof
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                                                                     RESULT 11
US-09-643-990A-1/c
; Sequence 1, Application US/09643990A
; Patent No. 6528289
; GENERAL INFORMATION:
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Best Local Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE DESCRIPTION: SEQ
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                                                                                                                                                                                                                                                                GAAACGCTTGCGCACTTAATGCAAAATTTAGGTGGCGAAGTGTTTTATCCTCAACCTCAA
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                                                                                                                                                                                                                                                                                                   ArgAlaLeuGluIleLeuThrAsnAlaThrGlnCysThrLeuLeuCysProProProArg
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 1830121 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
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                 Mark D. Ada
Owen White
                                                        Robert D.
Hamilton O. Smith
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                                    Adams
                                                    Fieischmann

    ACTAMAGCAGATATTGCTTATGCTTTCCMAGATGCGGTGGTG

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Matches:
Conservative:
Mismatches:
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Best Local Similarity:
Query Match:
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US-09-643-990A-1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO: 1:
                                      552572 AAAACATTTGCCGCAAATACAGTTAATCAAGCAATTAAAAACGAGGGCGAACTGATAGAG
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/643,990A
FILING DATE: 23-Aug-2000
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 08/487,429
FILING DATE: 1995-06-07
APPLICATION NUMBER: 08/426,787
FILING DATE: 1995-04-21
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Kenley K. Hoover
REGISTRATION NUMBER: 40,31
REFERENCE/DOCKET NUMBER: 1
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: 3 1/2 inch diskette
COMPUTER: Dell Pentium
OPERATING SYSTEM: MS DOS v6.22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
ADDRESSEE: Human Genome Sciences,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
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                                                                                                        ProGlyAspMetLeuAspLysValAlaArgArgLeuSerLeuIleLysHisProGluCys
                                                                                                                                                                                                                                                                                                                                         TTAGTGCGTGTCGATGGTGTAGGAAAATATGAAGTGATAGGAGAATCTATTGATGATGCT
LysGlyGlnIleLeuSerSerAlaAlaAspIleAlaAlaThrValGlnHisThrMetAla 119
                                                                       GlnHisValThrAspLysIleIleMetLysLysGluLysGluGluGly-----IleGlu
                                                                                                                                         PheAspIleLysProProLeuHisHisAlaLysAsnCysAspPheSerPheThrGlyLeu
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: nucleic acid
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TELEFAX: 310-309-8439
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: 9410 Key West Avenue
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INVENTION: The Nucleotide sequence of
the Haemophilus influenzae
Thereof, and Uses Thereof
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Matches:
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US-09-902-540-6612
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQ ID NOS: 16825
SEQ ID NO 6612
LENGTH: 996
TYPE: DNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Goldman, Barry S.
APPLICANT: Hinkle, Gregory J.
APPLICANT: Slater, Steven C.
APPLICANT: Slater, Steven C.
APPLICANT: Wiegand, Roger C.
TITLE OF INVENTION: Myxococcus xanthus Genome Sequences and Uses Thereof FILE REFERENCE: 38-10(15849)B
CURRENT FILINGION NUMBER: US/09/902,540
CURRENT FILING DATE: 2001-07-10
PRIOR APPLICATION NUMBER: 60/217,883
PRIOR FILING DATE: 2000-07-10
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101 GlyGlnIleLeuSerSerAlaAlaAspIleAlaAlaThrValGlnHisThrMetAlaCys
                                                                                                                                                                                                                                                            493 GCATATGACAAGACCGCTCGCATCCTCGGCCTG---CCGTATCCG-------
                                                                                                                                                                                         61 HisPheAspIleLysProProLeuHisHisAlaLysAsnCysAspPheSerPheThrGly
                                                                                                                                                                                                                                                                                          25 MetLeuAspLysValAlaArgArgLeuSerLeuIleLysHisProGluCysSerThrMet 44
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                                                                                    LeuGlnHisValThrAspLysIleIleMetLysLysGluLysGluGluGlyIleGluLys 100
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                                                      - ACGGCGGTGCTGCACCACGTGCAGAAGCACGGCGTGCCGCAG
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Matches:
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GENERAL INFORMATION:

APPLICANT: Goldman, Barry S.

APPLICANT: Hinkle, Gregory J.

APPLICANT: Slater, Steven C.

APPLICANT: Wiegand, Roger C.

TITLE OP INVENTION: Myxococcus xanthus Genome Sequences and FILE REFERENCE: 38-10(15849)B

CURRENT APPLICATION NUMBER: US/09/902,540

CURRENT FILING DATE: 2001-07-10

PRIOR APPLICATION NUMBER: 60/217,883

PRIOR FILING DATE: 2000-07-10

NUMBER OF SEQ ID NOS: 16825

SEQ ID NO 503

LENGTH: 2582
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CURRENT APPLICATION NUMBER: US/09/543,681A
CURRENT FILING DATE: 2000-04-05
PRIOR APPLICATION NUMBER: US 60/128,706
PRIOR PILING DATE: 1999-04-09
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APPLICANT: GARY BRETON
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erThrMetSerGlyGlyLysAlaIleGluHisLeuAlaLysGlnGlyAsnArgPheHis                ::: 

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Db 757 CTGATGATTAAATGTCGCCGCGCG------CTGGAGCAA 789

Oy 142 AsnAsn--AlavalLeuValAlaSerGlyClyValAlaSerAsnPheTyrIleArgArg 160

Oy 142 AsnAsn--AlavalLeuValAlaSerGlyClyValAlaSerAsnPheTyrIleArgArg 160

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Search completed: November 11, 2005, 03:17:05 Job time : 1010.64 secs

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Copyright
GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd.
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Minimum DB
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-Qe/cgn2 1/USPTO spool p/US10649273/runat 02112005 091339 15609/app_query.fasta_1.1429
-D8=PublIshed_Applications_NA -QFWT=fastap -SUFFIX=p2n.rnpb -MINMATCH-0.1
-LOOPCL=0 -LOOPEXT=0 -UNITG=bits -START=1 -END=-1 -MATRIX=blosum62
-TRANS=human40.cdi -LIST=45 -DOCALIGN=200 -THR SCORE=pct -THR MAX=100
-TRANS=human40.cdi -LIST=45 -DOCALIGN=200 -THR SCORE=pct -THR MAX=100
-THR MIN=0 -ALIGN=15 -MODE=LOCAL -OUTFWT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0
-MAXIEN=2000000000 -USER=US10649273 @CGR 1 1 1034 @runat 02112005 091339 15609
-MAXIEN=2000000000 -USER=US10649273 @CGR 1 1 1034 @runat 02112005 091339 15609
-NCPU=6 -ICPU=3 -NO MMAP -LARGEQUERY -NEG SCORES=0 -WAIT -DSPBLOCK=100
-LONGLOG -DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5
-FGAPEOP=6 -FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
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/ Cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*
/ Cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*
/ Cgn2_6/ptodata/1/pubpna/US09E_PUBCOMB.seq:*
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/ Cgn2_6/ptodata/1/pubpna/US09C_PUBCOMB.seq:*
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/ Cgn2_6/ptodata/1/pubpna/US10A_PUBCOMB.seq:*
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_6/ptodata/1/pubpna/US06_PUBCOMB.seq:*
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2490.420 Million cell updates/sec
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Query

## Regult No. ი 1213. 1213. Score 1203 1203 1059 1059 725 599 468 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 Match 20.0 20.0 26.8 26.8 21.8 20.7 48.3 37.7 37.7 1 1029 1 1830121 1 1830121 1 1830121 1 1830121 5 9967 Length 1000 1044 94750 936 1032 756 4360 300 1026 1026 1026 1146 18 18 US-10-282-122A-30016 24 US-10-958-216-49 24 US-10-958-216-51 24 US-10-9815-242-6946 18 US-10-282-122A-22020 US-10-779-543-7021 US-09-815-242-7701 US-10-430-201-3118 US-10-430-201-3119 US-10-424-599-66417 US-11-097-143-34190 占 US-10-329-670-1 US-10-158-865-1 US-10-981-687-1 US-10-081-051-2 US-10-282-122A-31043 US-10-081-051-8 US-10-282-122A-2697 US-10-672-787-38 US-10-282-122A-8315 US-10-651-722-23 US-10-067-443-1 US-10-120-988-177 437-963-11249 097-143-34190 424-599-66417 82-122A-26972 43-561-50 22A-14674 sequence 20426, A Sequence 3119, Ap Sequence 3119, A Sequence 34190, A Sequence 34190, A Sequence 34190, A Sequence 34190, A Sequence 11249, A Sequence 11674, Appl Sequence 50, Appl Sequence 315, Appl Sequence 31043, A Sequence 8315, Appl Sequence 2, Appli Sequence 2, Appli Sequence 7021, Ap Sequence 7021, Ap Sequence 7071, Ap Sequence 7071, Ap Sequence 51, Appl Sequence 51, Appl Sequence 61, Appli Sequence 1, Appli Sequence 1, Appli Sequence 1, Appli Sequence 1, Appli Sequence 1, Appli Sequence 1, Appli Sequence 1, Appli Sequence 1, Appli Sequence 1, Appli Sequence 1, Appli Sequence 1, Appli Sequence 1, Appli Sequence 1, Appli Sequence 529, App Description Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence e 177, App e 23, Appl e 23, Appl e 23, Appl e 1, Appli e 1, Appli e 1, Appli e 1, Appli e 1, Appli e 1, Appli e 1, Appli e 1, Appli e 21, Appl e 21, Appl e 21, Appl e 21, Appl e 21, Appl e 21, Appl e 21, Appl e 21, Appl e 1047, Ap e 6, Appli e 1047, Ap e 6, Appli e 1040, Appl e 1040, Appl 20, Appl 20, Appl 20, Appl

## ALIGNMENTS

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RESULT 1
US-10-120-988-177
US-10-120-988-177, Application US/10120988
; Publication No. US20030219745A1
; GENERAL INFORMATION:
Tank V Tom
                                                                     APPLICANT: Tang, Y. Tom
APPLICANT: Goodrich, Ryle
APPLICANT: Liu, Chenghua
APPLICANT: Ren, Feiyan
APPLICANT: Wang, Dunrui
APPLICANT: Drmanac, Radoje
               APPLICANT: Wang, Dunrui
APPLICANT: Drmanac, Radoje T.
TITLE OF INVENTION: No. US20030219745A1el Nucleic Acids and
TITLE OF INVENTION: Polypeptides
REFERENCE: 802CON
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Best Local Similarity:
Query Match:
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; NAME/KEY: CDS
; LOCATION: (205)..(1305)
US-10-120-988-177
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CURRENT FILING DATE: 2002-04-11
PRIOR APPLICATION NUMBER: 09/774,528
PRIOR FILING DATE: 2001-01-30
NUMBER OF SEQ ID NOS: 441
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ORGANISM: Homo sapiens
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                                            GlyIleLeuHisAspIleGluGlyIleArgTyrGluProLysCysProLeuGlyValAsp 220
                                                                                         HisLeuValLysArgThrHisArgAlaIleLeuPheCysLysGlnArgAspLeuLeuPro 140
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GCTCTGGAAATTTTAACAAACGCAACACAGTGCACTTTGTTGTGTCCTCCTCCCAGACTA
                                                                                                                                                     AlaLeuGluIleLeuThrAsnAlaThrGlnCysThrLeuLeuCysProProProArgLeu 180
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RESULT 2
US-10-067-443-23
; Sequence 23, Application US/10067443
; Publication No. US20030082782A1
; Publication No. US20030082782A1
; GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
; TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE HIGHLY EXPRITITE OF INVENTION: SPINAL CORD, MP-1
; TITLE OF INVENTION: SPINAL CORD, MP-1
; FILE REFERENCE: D0073 NP
; CURRENT APPLICATION NUMBER: US/10/067,443
; CURRENT FILING DATE: 2002-02-05
; PRIOR APPLICATION NUMBER: US 60/266,518
; PRIOR PILING DATE: 2001-02-05
; PRIOR FILING DATE: 2001-02-05
; PRIOR FILING DATE: 2001-04-10
; NUMBER: OF SEQ ID NOS: 71
; SOPTWARE: PATENTIN VERSION 3.0
; SEQ ID NO 23
; LENGTH: 1526
; TYPE: Number of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the c
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                 CysThrAspAsnGlyIleMetIleAlaTrpAsnGlyIleGluArgLeuArgAlaGlyLeu
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Sequence 22, Application US/10649273
Publication No. US20040043407A1
GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
ITITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A N
FILE REFERENCE: D0073 CNT
CURRENT APPLICATION NUMBER: US/10/649,273
CURRENT FILING DATE: 2003-08-27
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 10/067,443
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
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DB:
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SEQ ID NO 23
LENGTH: 1526
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             GlnAsnAsnAlaValLeuValAlaSerGlyGlyValAlaSerAsnPheTyrIleArgArg 160
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                                                                                                                                         GlyGlnIleLeuSerSerAlaAlaAspIleAlaAlaThrValGlnHisThrMetAlaCys 120
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Percent Similarity:
Best Local Similarity:
Query Match:
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TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A N
FILE REFERENCE: DO073 DIV
CURRENT APPLICATION UNMBER: U$/10/651,722
CURRENT FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: U$ 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR FILING DATE: 2001-02-05
PRIOR FILING DATE: 2002-02-05
PRIOR FILING DATE: 2002-02-05
PRIOR FILING DATE: 2002-04-10
NUMBER OF SEQ ID NOS: 71
SOFTWARE: PatentIn version 3.2
SEQ ID NO 23
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; ORGANISM: homo
US-10-651-722-23
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US-10-651-722-23
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Mismatches:
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Sequence 1, Application US/10067443

Publication No. US20030082782A1

GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A N
TITLE OF INVENTION: SPINAL CORD, MP-1
FILE REFERENCE: D0073 NP
CURRENT APPLICATION UMMBER: US/10/067,443

CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR APPLICATION NUMBER: US 60/262,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71

NUMBER OF SEQ ID NOS: 71
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US-10-067-443-1
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Best Local Similarity:
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SEQ ID NO 1
LENGTH: 2197
TYPE: DNA
ORGANISM: Homo sapiens
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NAME/KEY: CDS
LOCATION: (231)..(1472)
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         CysSerThrMetSerGlyGlyLysAlaIleGluHisLeuAlaLysGlnGlyAsnArgPhe
                                                                                                       CTGTTGGCATTAGTTCAAGGAGTTTCAGATTTTCTGCTTCTTGGAAAGTCTTTGGACATA
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Best Local Similarity:
Query Match:
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US-10-649-273-1
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SEQ ID NO 1
LENGTH: 2197
TYPE: DNA
ORGANISM: Homo sapiens
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Sequence 1, Application US/10649273
Publication No. US20040043407A1
GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYMUCLEOTIDE ENCODING A N
FILE REFERENCE: D0073 CNT
CURRENT APPLICATION NUMBER: US/10/649,273
CURRENT FILING DATE: 2003-08-27
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR TILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 10/067,443
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
NUMBER OF SEQ ID NOS: 71
US-10-649-273-2_COPY_176_414 (1-239)
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       x US-10-649-273-1 (1-2197)
                                                                       Conservative: Mismatches: Indels:
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Matches:
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APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL METALOPROTEASE, MP-
FILE REFERENCE: D0073 DIV
CURRENT APPLICATION NUMBER: US/10/651,722
CURRENT FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 10/067,443
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOFTWARE: Patentin version 3.2
SEQ ID NO 1
LENGTH: 2197
TYPE: DNN
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                                   ORGANISM: Homo PEATURE:
               NAME/KEY: CDS
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RESULT 8
US-10-480-988-36
US-10-480-988-36
Sequence 36, Application US/10480988
Publication No. US20050069877A1
GENERAL INFORMATION:
APPLICANT: GANDHI, Ameena R.; KABLE, Amy E.;
APPLICANT: SWARNAKAR, Anita; HAPALIA, April J.A.;
APPLICANT: TRAN, Bao: DUGGAN, Brendan M.;
APPLICANT: HONCHELL, Cynthia D.; NGUYEN, Danniel B.;
APPLICANT: LU, Dyung Aina M.; LEE, Ernestine A.;
APPLICANT: YUE, Henry; FORSYTHE, Ian J.;
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; OTHER INFORMATION: Incyte
US-10-480-988-36
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PRIOR FILING DATE: 2002-06-18
PRIOR PRILING DATE: 2001-06-22
PRIOR PAPPLICATION NUMBER: US 60/300,508
PRIOR PAPPLICATION NUMBER: US 60/303,445
PRIOR APPLICATION NUMBER: US 60/305,405
PRIOR PILING DATE: 2001-07-06
PRIOR PILING DATE: 2001-07-13
PRIOR PILING DATE: 2001-08-09
PRIOR PILING DATE: 2001-08-09
PRIOR APPLICATION NUMBER: US 60/314,821
PRIOR PILING DATE: 2001-08-24
PRIOR PILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: US 60/315,992
PRIOR APPLICATION NUMBER: US 60/378,205
PRIOR APPLICATION NUMBER: US 60/378,205
PRIOR APPLICATION NUMBER: US 60/378,205
PRIOR APPLICATION NUMBER: US 60/378,205
PRIOR PILING DATE: 2002-05-03
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SOFTWARE: PERL Program
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CURRENT FILING DATE: 2003-12-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: SPRAGUE, WILLIAM W.; TANG, Y. TOM;
APPLICANT: LU, Yan; ZEBARJADIAN, Yeganeh
TITLE OF INVENTION: PROTEIN MODIFICATION AND MAINTENANCE MOLECULES
FILE REFERENCE: PF-1040 USN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA ORGANISM: Homo sapiens FEATURE:
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LENGTH: 2572
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YANG, Junning; THANGAVELU, Kavitha;
GIETZEN, Kimberly J.; DING, Li;
BAUGHN, Mariah R.; BOROWSKY, Mark L.;
YAO, Monique G.; CHAWLA, Narinder K.;
YAO, Motique G.; CHAWLA, Narinder K.;
MASON, Patricia M.; GURURAJAN, Rajagopal;
LEE, Sao Yeun; TRAN, Uyen K.;
ELLIOTT, Vicki S.; LUO, Wen;
ELLIOTT, Vicki S.; LUO, Wen;
                                                        HisPheAspIleLysProProLeuHisHisAlaLysAsnCysAspPheSerPheThrGly
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              LeuGlnHisValThrAspLysIleIleMetLysLysGluLysGluGluGlyIleGluLys 100
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US-10-067-443-21
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; LENGTH: 1387
; TYPE: DNA
; ORGANISM: homo :
US-10-067-443-21
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TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A 1
TITLE OF INVENTION: SPINAL CORD, MP-1
FILE REFERENCE: D0073 NP
CURRENT APPLICATION NUMBER: US/10/067,443
CURRENT FILING DATE: 2002-02-05
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR APPLICATION NUMBER: US 60/262,814
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
                                                                                                                                                                                                              US-10-649-273-2_COPY_176_414 (1-239) x US-10-067-443-21 (1-1387)
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                                                                              AlaProGlyAspMetLeuAspLysValAlaArgArgLeuSerLeuIleLysHisProGlu
                                                                                                                                         CTGTTGGCATTAGTTCAAGGAGTTTCAGATTTTCTGCTTCTTGGAAAGTCTTTGGACATA
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Matches:
Conservative:
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Indels:
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Sequence 21, Application US/10649273

Publication No. US20040043407A1

GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Company
ITILE OF INVENTION: POLYNUCLEOTIDE ENCODING A N
FILE REFERENCE: D0073 CNT
CURRENT APPLICATION NUMBER: US/10/649,273
CURRENT FILING DATE: 2003-08-27
PRIOR APPLICATION NUMBER: US 60/266,518
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 10/067,443
PRIOR FILING DATE: 2001-02-05
PRIOR APPLICATION NUMBER: US 60/282,814
PRIOR PILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 71
SOFTWARE: Patentin version 3.2
SEQ ID NO 21
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; Sequence 21, Application US/10651722
; Publication No. US20040048302A1
; GENERAL INFORMATION:
; APPLICANT: Bristol-Myers Squibb Company
; TITLE OF INVENTION: POLYNUCLECTIDE ENCODING A N
; FILB REFERENCS: D0073 DIV
; CURRENT PILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: US 60/266,518
; PRIOR PILING DATE: 2001-02-05
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US-10-651-722-21
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; PRIOR APPLICATION NUMBER: US 10/067,443
; PRIOR FILING DATE: 2002-02-05
; PRIOR APPLICATION UNMBER: US 60/282,814
; PRIOR FILING DATE: 2001-04-10
; NUMBER OF SEQ ID NOS: 71
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 21
; LENGTH: 1387
; TYPE: DNA
; ORGANISM: homo sapiens
US-10-651-722-21
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                                                                                                                                                                                                                               HisThrMetAlaCysHisLeuValLysArgThrHisArgAlaIleLeuPheCysLysGln
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ProLeuGlyValAspIleSerLysGluValGlyGluAlaSerIleLysValProGlnLeu
                                           LeuArgAlaGlyLeuGlyIleLeuHisAspIleGluGlyIleArgTyrGluProLysCys
                                                                                        ProProProArgLeuCysThrAspAsnGlyIleMetIleAlaTrpAsnGlyIleGluArg
                                                                                                                                                                                  ArgAspLeuLeuProGlnAsnAsnAlaValLeuValAlaSerGlyGlyValAlaSerAsn
                                                                                                                                                                                                                  CACACAATGGCATGTCATCTTGTGAAAAGAACACATCGGGCTATTCTGTTTTGTAAGCAG
                                 CTACGTGGTGGCTTGGGGCATTTTACATGACATAGAAGGCATCCGCTATGAACCAAAATGT
                                                                            CCTCCTCCCAGACTATGCACTGATAATGGCATTATGATTGCATGGAATGGTATTGAAAGA
                                                                                                                           TTCTATATCCGCAGAGCTCTGGAAATTTTAACAAACGCAACACAGTGCACTTTGTTGTGT
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CCTCTTGGAGTAGACATATCAAAAGAAGTTGGAGAAGCTTCCATAAAAGTACCACAATTA

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Query Match:
DB:
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; TYPE: DNA
; ORGANISM: human
US-10-887-553A-1047
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US-10-887-553A-1047
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Publication No. US20050085436A1
GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: Method to treat conditions associated TITLE OF INVENTION: with insulin signalling dysregulation FILE REFERENCE: 4-33262 CURRENT APPLICATION NUMBER: US/10/887,553A CURRENT FILING DATE: 2004-07-08 PRIOR APPLICATION NUMBER: 60/485,883 PRIOR APPLICATION NUMBER: 60/485,883 PRIOR PILING DATE: 2003-08-07 NUMBER OF SEO ID NOS: 1208
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APPLICANT: Li, Hao
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ArgAspLeuLeuProGlnAsnAsnAlaValLeuValAlaSerGlyGlyValAlaSerAsn 155
                                                              HisThrwetAlaCysHisLeuValLysArgThrHisArgAlaIleLeuPheCysLysGln 135
                                                                                                                                                                                                           CTTCAACACGTTACTGATAAAATAATAATGAAAAAGGAAAAAGGGAAGGTATATTTCTA
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                                                                                                     TGCAGGTATGAGAAGGGGGCAAATCCTGTCTTCAGCAGCAGACATTGCTGCCACAGTACAG
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APPLICANT: Leiby, Kevin R.

APPLICANT: Kapeller-Libermann, Rosana

APPLICANT: Kapeller-Libermann, Rosana

APPLICANT: Glucksmann, Maria A.

APPLICANT: Glucksmann, Maria A.

TITLE OF INVENTION: 38650, 28472, 5495, 65507, 81588, AND

TITLE OF INVENTION: 14354 METHODS AND COMPOSITIONS OF HUMAN PROTEINS AND USES

TITLE OF INVENTION: THEREOF

FILE REFERENCE: 381552004900

CURRENT FILING DATE: 2001-11-08

PRIOR APPLICATION NUMBER: 60/246,768

PRIOR APPLICATION NUMBER: 60/246,772

PRIOR APPLICATION NUMBER: 60/246,772

PRIOR PILING DATE: 2000-11-08

PRIOR APPLICATION NUMBER: 60/246,772

PRIOR FILING DATE: 2000-11-08

PRIOR FILING DATE: 2000-11-15

NUMBER OF SEQ ID NOS: 49

SOFTWARE: FastSEQ for Windows Version 4.0
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                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 1245
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HisPheAspIleLysProProLeuHisHisAlaLysAsnCysAspPheSerPheThrGly 80
                                                                    CysSerThrMetSerGlyGlyLysAlaIleGluHisLeuAlaLysGlnGlyAsnArgPhe
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Conservative:
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CURRENT APPLICATION NUMBER: US/10/012,140
CURRENT FILING DATE: 2001-11-08
PRIOR APPLICATION NUMBER: 60/246,768
PRIOR FILING DATE: 2000-11-08
PRIOR REPLICATION NUMBER: 60/246,772
PRIOR RELING DATE: 2000-11-08
PRIOR APPLICATION NUMBER: 60/249,185
PRIOR APPLICATION NUMBER: 60/249,185
PRIOR FILING DATE: 2000-11-15
NUMBER OP SEQ ID NOS: 49
SOFTWARE: FASESEQ for Windows Version 4.0
SEQ ID NO 4
 Percent Similarity:
Best Local Similarity:
                                Score:
                                                Alignment Scores: Pred. No.:
                                                                                              US-10-012-140-4
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US-10-012-140-4
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APPLICANT: Leiby, Kevin R.
APPLICANT: Kapeller-Libermann, Rosana
APPLICANT: Glucksmann, Maria A.
TITLE OF INVENTION: 38650, 28472, 5495, 65507, 81588,
TITLE OF INVENTION: 14354 METHODS AND COMPOSITIONS OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 4, Application US/10012140 Publication No. US20030009017A1
                                                                                                                                                                                                                                                                                                                                                                                                                                               FILE REFERENCE: 381552004900
                                                                                                           FEATURE:
NAME/KEY: misc_feature
LOCATION: (1)...(1820)
OTHER INFORMATION: n =
                                                                                                                                                                                                                   TYPE: DNA
ORGANISM: Homo
                                                                                                                                                                          NAME/KEY: CDS
LOCATION: (146)...(1390)
                                                                                                                                                                                                          FEATURE:
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US-10-094-749-400
APPLICANT: ISOGAI, TAKAO
APPLICANT: SUGIYAMA, TOMO
APPLICANT: OTSUKI, TETSUJ
APPLICANT: WAKAMATSU, AI
APPLICANT: SATO, HIROYUKI
APPLICANT: ISHII, SHIZUKO
APPLICANT: ISHII, SHIZUKO
APPLICANT: ISOKO, YUUKO
APPLICANT: HIO, YURI
APPLICANT: HIO, YURI
APPLICANT: MAGAI, KEICHI
APPLICANT: NAGAI, KEICHI
APPLICANT: IRIE, RYOTAKO
APPLICANT: TAMECHIKA, ICH
APPLICANT: TAMECHIKA, ICH
APPLICANT: SEKI, NAOHIKO
SEKI, NAOHIKO
                                                                                                                                                                                                    Sequence 400, Application US/10094749
Publication No. US20030219741A1
GENERAL INFORMATION:
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HIO, YURI
OTSUKA, KAORU
NAGAI, KEIICHI
IRIE, RYOTARO
TAMECHIKA, ICHIRO
SEKI, NAOHIKO
                                                                           YAMAMOTO, JUN-ICHI
ISONO, YUUKO
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OTSUKI, TETSUJI
WAKAMATSU, AI
SATO, HIROYUKI
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APPLICANT: NAGAHARI, KENJI
APPLICANT: NASUHO, YASUHIKO
ITITLE OP INVENTION: NOVEL FULL-LENGTH CDNA
FILE REFERENCE: 084335/0160
CURRENT APPLICATION NUMBER: US/10/094,749
CURRENT FILING DATE: 2002-03-12
PRIOR APPLICATION NUMBER: 60/350,435
PRIOR FILING DATE: 2002-01-24
PRIOR APPLICATION NUMBER: JP 2001-328381
PRIOR FILING DATE: 2001-09-14
NUMBER OF SEQ ID NOS: 3381
SOFTWARE: Patentin Ver: 2.1
SEQ ID NO 400
LENGTH: 2208
TYPE: DNA
ORGANISM: Homo sapiens
US-10-094-749-400
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Best Local Similarity:
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